# Rare, Threatened, and Endangered Plants of Maryland

January 2018





Larry Hogan, Governor Mark Belton, Secretary



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Cover photo: Toothed Tick Trefoil (*Desmodium cuspidatum*), a rare species of barrens in Maryland. (Photo credit, Christopher Frye).

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#### INTRODUCTION

The following report identifies 742 native Maryland plants that are among the least understood, the rarest, and the most in need of conservation efforts. It includes species occurring in Maryland that are on the federal list of Endangered and Threatened Wildlife and Plants under the Endangered Species Act (ESA), species currently on the State's Threatened and Endangered Species List, and additional species that are considered rare or under assessment by the Wildlife and Heritage Service. The purpose of this report is to inform the public of rare species, to provide an indication of their degree of rarity, to solicit additional information on the status and distribution of these species, and to promote an interest in their conservation. For more information about Maryland's botanical heritage see the 2014 report of the Maryland Botanical Heritage Work Group to the Governor and the Maryland General Assembly, available at: <a href="http://msa.maryland.gov/msa/mdmanual/26excom/html/04botanical.html">http://msa.maryland.gov/msa/mdmanual/26excom/html/04botanical.html</a>.

Compiled by Wildlife and Heritage Service staff and conservation partners, these treatments of rare species are a result of more than 35 years of effort to gather, research, and analyze data from numerous sources, such as herbaria, scientific literature, unpublished documents, reports from botanists and amateur naturalists, and extensive field work conducted by scientists from the Department of Natural Resources (DNR). Our knowledge of Maryland's flora has grown steadily. Wildlife and Heritage Service biologists and cooperators have located species which were previously unrecorded for the state and have discovered that some species are scarcer than previous records indicated. Similarly, some species are now known to be either more widespread or less vulnerable than previously believed. Thus, the conservation rank and legal status of each species are periodically revised to keep pace with new information. The list was first published in 1984, and its last revision was in 2016.

The primary Maryland law (enacted in 1975) that allows and governs the legal listing of endangered species is the Nongame and Endangered Species Conservation Act (Annotated Code of Maryland 10-2A-01). The Act is supported by regulations (Code of Maryland Regulations, COMAR 08.03.08) that define listing criteria for endangered, threatened, and endangered extirpated species; establishes the purpose and intent of collecting permits; and lists prohibited activities. Maryland regulations may be found online at: <a href="http://www.dsd.state.md.us/COMAR/ComarHome.html">http://www.dsd.state.md.us/COMAR/ComarHome.html</a>

The Wildlife and Heritage Service (the Service) within DNR is the lead state agency responsible for the identification, ranking, protection, and management of rare and endangered species and natural communities in Maryland. The Service seeks to identify and sustain populations of rare plants and animals through the maintenance of healthy natural ecosystems. The Service maintains a database of natural areas and occurrences of rare, threatened, and endangered plant and animal species. This database is aligned with the NatureServe network, an international association of over 80 programs that tracks and monitors species and plant communities using identical methodologies across all 50 states, Canada, and Latin America. Wildlife and Heritage Service biologists are concerned with many more species than those included on Maryland's Threatened and Endangered Species list. Some of these species are potential candidates for listing and usually require further investigation into their conservation status and rank. Others are thought to be secure at present but are worthy of attention because of limited distributions, declining populations, or other ecological vulnerabilities.

#### **ABOUT THIS LIST**

The State Botanist established a committee to review the format and information content of the Maryland list of rare, threatened, and endangered plant species. The committee's recommendations have been incorporated into this and future documents, and they represent substantial changes to the presentation and content of the Maryland list. This revised and updated list incorporates proposals to alter the Maryland legal status (defined in Table 2 and identified in Appendix I); emendations to the County and/or Physiographic Province distributions of species; incorporates additional flowering and fruiting dates; and finally, improvements to species treatments.

#### UNDERSTANDING CONSERVATION RANK AND LEGAL STATUS

Conservation status ranks are intended to indicate risk of elimination or extinction in the foreseeable future and are arranged along a simple numerical scale (1-5) with the lower numbers reflecting increasing rarity and risk. Conservation ranks also present geographic information about rarity. State ranks (S ranks) communicate the rarity of the species in the state; whereas global ranks (G ranks) communicate the rarity of the species throughout its range (although most species are far from being globally distributed). The rank of a species is determined through analyses of population number, size, viability, threats, and trends, among other factors. The final metric, a combination of the numeric index (1-5) and the geographic identifier (G or S), distills this large amount of information into a single metric. Thus, for a particular plant species that has a global rank of G1 and a state rank of S1, the species is not only rare and at risk of elimination from within Maryland but also rare throughout its entire range and at risk of extinction. Similarly, a plant species with ranks of G5 and S5 relate that the plant is common in Maryland and is demonstrably secure throughout the species' global range.

Most species have single-valued conservation ranks; however, some variations are possible. Range ranks, e.g., G1G2 or S1S2, indicate the (usually narrow) range of uncertainty in the rank. For example, a species may have more populations than is typical of the lower rank but few are protected; this may affect the viability of the population(s). A taxon (T) rank follows the global (G) rank of the full species as a qualifier to indicate the conservation status of the subspecies or variety of that species, e.g., G5T3. The latter indicates that the subspecies or variety is much rarer than the typical species; the typical species may or may not occur in Maryland. A global rank may also be followed by a 'Q'-qualifier to indicate that there are prevailing taxonomic questions for that species (e.g., G4Q). A '?'-qualifier may be used to indicate that there is a level of uncertainty in the global or state rank (e.g, G4? or S2?). Finally, the "!" symbol to the right of a species name indicates that the conservation status of that species is currently under review. Definitions of conservation status ranks and rank qualifiers are presented in Table 1. Proposals to alter the Maryland status are identified in parentheses in the State Status column and defined in Table 2. These proposals will require regulatory approval before the new legal statuses become effective. State ranks for many species are modified annually or as needed to reflect current information. All member programs of the NatureServe Network of Natural Heritage Programs and Conservation Data Centers across the Western Hemisphere use the same ranking system and format. This allows direct conservation status comparisons across the political and geographic landscape, and it is one of the most powerful aspects of the Network.

 Table 1. Definitions of Global (G) and State (S) Conservation Ranks and Rank Qualifiers.

Rank	Definitions global/state
GX or SX	<b>Presumed Extirpated</b> —Species believed to be extirpated from the jurisdiction (i.e. global, or state/province). Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
GH or SH	<b>Historical</b> ( <b>Possibly Extirpated</b> )—Known only from historical records but still some hope of rediscovery. There is evidence that the species may no longer be present in the jurisdiction, (i.e. global, or state/province) but not enough to state this with certainty.
G1 or S1	<b>Critically Imperiled/Highly State Rare</b> —At very high risk of extinction or extirpation due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors. Typically occurring in five or fewer populations.
G2 or S2	<b>Imperiled/State Rare</b> —At high risk of extinction or extirpation due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors. Typically occurring in 6-20 populations.
G3 or S3	<b>Vulnerable/Watchlist</b> —At moderate risk of extinction or extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors. Typically occurring in 21-80 populations.
G4 or S4	<b>Apparently Secure</b> —At fairly low risk of extinction or extirpation due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
G5 or S5	<b>Demonstrably Secure</b> —At very low risk of extinction or extirpation due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
S3.1	<b>Vulnerable and globally rare</b> —A species that is actively tracked by the Service because of the global significance of Maryland occurrences. Although not currently threatened or endangered, Maryland occurrences may be critical to the long-term security of the species.
SE	Exotic—Established but not native to Maryland.
SNA	Not Applicable—A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
SNR	Not ranked.
SR	<b>Reported</b> —Reported from Maryland but without persuasive evidence that would provide a basis for either accepting or rejecting the report. These species are presented in Appendix II.
SRF	<b>Reported falsely</b> —Reported in error from Maryland and the error may persist in the literature. These species are presented in Appendix II.
SU	<b>Status Uncertain</b> —A numerical rank cannot be established with confidence for reasons including lack of historical records, low survey effort, cryptic nature of the species, or concerns that the species may not be native to the state. Uncertainty spans a range of more than three ranks as defined above.
Q	<b>A rank qualifier</b> —Indicates that the taxon has questionable, controversial, or uncertain taxonomic standing, e.g., treated by some authors as a species whereas others treat as a subspecies or variety or not at all.
T	A rank qualifier—Indicates that the infraspecific taxon (subspecies or variety) is ranked differently than the typical species.
?	A rank qualifier—Indicating uncertainty that may span 2-3 ranks as defined above.
!	<b>An indicator</b> that the conservation status of that species is currently under review.

Legal status presents a simple hierarchy of endangerment in three, mostly familiar, categories: Threatened (the lowest status), Endangered (the highest status), and Endangered Extirpated (a category unique to Maryland). Definitions of legal statuses are presented in Table 2. Legal protection statuses of species are typically reviewed and updated, if needed, every two to three years. All species listed as threatened and endangered at the federal level are also listed within Maryland regulations.

**Table 2**. Definitions of State and Federal legal protection Status.

State Status	Definition
Endangered (E)	A species whose continued existence as a viable component of Maryland's flora is determined to be in jeopardy.
Threatened (T)	A species that appears likely, within the foreseeable future, to become endangered in Maryland.
Endangered Extirpated (X)	A species that was once a viable component of the flora of Maryland, but for which no naturally occurring populations are known to exist.
Proposed Delist (PD)	A species proposed for delisting by the Service. These proposals are indicated in parentheses to the right of the current State Status.
Proposed Endangered (PE)	A species proposed for listing as endangered in Maryland. These proposals are indicated in parentheses to the right of the current State Status.
Proposed Threatened (PT)	A species proposed for listing as threatened in Maryland. These proposals are indicated in parentheses to the right of the current State Status.
Federal Status	Definition
Endangered (LE)	Taxa listed as Endangered under the federal ESA; in danger of extinction throughout all or a significant portion of its range.
Threatened (LT)	Taxa listed as Threatened under the federal ESA; likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

#### **GUIDE TO THE LIST**

The rare, threatened, and endangered plant species is arranged alphabetically by scientific name. Taxonomy follows Weakley's *Flora of the Southern and Mid-Atlantic States* (2015) unless stated otherwise (Weakley's Flora is freely available for download at <a href="http://www.herbarium.unc.edu/flora.htm">http://www.herbarium.unc.edu/flora.htm</a>). The header on each page of the treatments shows (from left to right) Scientific Name, Common Name, the Global Rank (G rank), State Rank (S rank), State Status (if any), and Federal Status (if any). Common names, global ranks, and state ranks may also be found at the NatureServe Explorer website at: <a href="http://explorer.natureserve.org/">http://explorer.natureserve.org/</a>. Below the first line of each treatment more detailed information is presented. A key to the treatments is presented in Figure 1 on page 12. Directly underneath the scientific name of the species is the scientific name of the plant family followed by the common name of the family in parentheses.

Taxonomic synonyms (**Syn**) in common use correspond to four major references for our region starting with R. G. Brown and M. L. Brown and R. G. Brown's 1984 *Herbaceous Plants of Maryland*; H. A. Gleason and A. Cronquist's 1991 *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*; and M. L. Fernald's 1950 *Gray's Manual of Botany*, 8th Edition. Taxonomic references (**Taxref**) point to a published source; this generally refers to Weakley (2015) unless otherwise noted. Taxonomic notes (**Taxnote**) are provided to detail our understanding of the taxonomy of the species. Conservation and ecology notes (**Cons/Econote**) detail factors influencing the rank and status of the species, but also include more general ecological notes. The species' most commonly associated habitat in Maryland (**Habitat**) is presented as synoptically as possible given the need to conserve space. Some habitat descriptions follow Harrison and Stango (2016) plant community descriptions according to the taxonomy of the National Vegetation Classification (<a href="http://usnvc.org/explore-classification">http://usnvc.org/explore-classification</a>). The Maryland distribution (**Distr**) of the species is presented, first by major physiographic province (see Figure 2 for definitions), followed by county names in parentheses. Three distributional qualifiers (?, \*, I) may occur in the county distribution to indicate particular circumstances (see <a href="mailto:Table 3">Table 3</a> for definitions). Distributional data comes from a variety of sources but mostly from the records and databases of the Maryland Natural Heritage Program, the Maryland Biodiversity Project, and the Maryland Department of Natural Resources Herbarium (international acronym is TAWES). Finally, flowering (**Flw**) and fruiting (**Fr**) periods for the species appear on the last line of the treatment. These are Maryland-specific and data collection is ongoing. Treatments are followed by a full **index** of the genera.

**Appendix I** details the changes in rank and legal status for all species since the last publication of the list in December 2016. **Appendix II** details the list of species reported or falsely reported that have been or are attributed to Maryland and that are not presented in the body of the treatments.

**Appendix III** contains a list of 69 ecological community groups that are currently recognized by the Maryland Natural Heritage Program.

The Literature Cited section contains all sources cited in the plant treatments.

A glossary of select terms is provided at the end of this document.

**Table 3**. Definitions of qualifiers used in the county distribution of species.

Distributional Qualifier	Definition
County name?	Record for the county is reported but unverified or may indicate that the record occurs outside of the known range or in atypical habitat.
County name*	Record for the county is based upon a historical collection but no extant population is known.
County name <sup>I</sup>	Record for the county is the result of an introduction.

#### ADDITIONAL RESOURCES AND IMPORTANT LINKS

#### **National**

The U.S. Department of Interior, Fish and Wildlife Service's (USFWS) Office of Endangered Species publishes a list of federally-designated Threatened and Endangered species. Copies of the USFWS publications: Endangered and Threatened Wildlife and Plants, and Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review (reprinted from the Federal Register), may be obtained from the Publication Unit, U.S. Fish and Wildlife Service, Washington DC 20240 or viewed at: <a href="http://www.fws.gov/endangered/">http://www.fws.gov/endangered/</a>

The Biota of North America Program (Synthesis of North American Flora) includes links to county-level distributions and taxonomic information of plant taxa occurring in North America at the following link: <a href="https://www.bonap.org">www.bonap.org</a>.

NatureServe compiles data from all member programs in the Network of Natural Heritage Programs and Conservation Data Centers and provides a synthesis in the form of species summaries on their Explorer website: <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a>

#### Regional

The Virginia Botanical Associates provide an online atlas of the Virginia flora at: www.vaplantatlas.org.

# Maryland

The University of Maryland-College Park, Norton-Brown Herbarium provides links to data and images of Maryland specimens at: www.nbh.psla.umd.edu.

The Maryland Plant Atlas provides information on the distribution of plant species in Maryland at: <a href="http://www.marylandplantatlas.org/index.php">http://www.marylandplantatlas.org/index.php</a>

The Maryland Biodiversity Project provides information on all species at: http://www.marylandbiodiversity.com/

The Smithsonian Institution provides online searches of plant species in the Flora of the Washington-Baltimore Area at: <a href="https://www.botany.si.edu">www.botany.si.edu</a>.

For more information about Maryland's botanical heritage see the 2014 report of the Maryland Botanical Heritage Work Group to the Governor and the Maryland General Assembly, available at:

http://msa.maryland.gov/msa/mdmanual/26excom/defunct/html/04botanical.html

To obtain additional copies of this report; to receive a copy of Rare, Threatened, and Endangered Plants of Maryland; or to receive other information on Maryland's rare species and natural areas; please contact the Maryland Wildlife and Heritage Service at Tawes State Office Building, E-1, 580 Taylor Avenue, Annapolis, MD 21401 or visit the website at:

dnr.maryland.gov/wildlife/Pages/plants\_wildlife/rte/rteplants.aspx

The Maryland Geological Survey (<a href="http://www.mgs.md.gov/">http://www.mgs.md.gov/</a>) provides detailed physiographic maps with accompanying explanatory text, available at: <a href="http://www.mgs.md.gov/geology/physiographic\_map.html">http://www.mgs.md.gov/geology/physiographic\_map.html</a>.

#### **HOW YOU CAN HELP**

You can take an active part in conserving Maryland's rare species by contacting the Wildlife and Heritage Service with the following types of information:

#### I. Submitting information on rare, threatened, or endangered species

- 1. Location details should be included (exact mapped location using GPS is preferred, but not required). Online applications such as Google Earth are invaluable but precise, written directions including driving and walking are acceptable.
- 2. Documentation that includes a photograph, description of the species, identification source, and habitat description should accompany the report.
- 3. Information on the ecology and or biology of the species including observed and/or identified pollinators should accompany the report.
- \*\*Additional information, including a downloadable .pdf of our rare plant reporting form can be found at: <a href="mailto:dnr.maryland.gov/wildlife/Pages/plants\_wildlife/rte\_reportinginst.aspx">dnr.maryland.gov/wildlife/Pages/plants\_wildlife/rte\_reportinginst.aspx</a>

# II. Assisting the Service with rank and status

- 1. Submit data indicating that a species should be assigned a different rank and status, with supporting documentation.
- 2. Submit nominations of additional species to be included on the list or of species that should be deleted from the list, with supporting documentation.
- 3. Submit information on historical collections or from documentation in the scientific literature.

#### RARE, THREATENED, AND ENDANGERED PLANTS OF MARYLAND

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**Figure 1.** Quick reference to plant treatments. Superscript numerals in the example (Harperella) identify terms that are defined in the key.

Scientific Name <sup>1</sup>	Common Name <sup>2</sup>	Global Rank <sup>3</sup>	State Rank <sup>4</sup>	State Status <sup>5</sup>	Federal Status <sup>6</sup>	
Harperella nodosa Rose <sup>7</sup> Apiaceae (Carrot Family)	Harperella	G2	<b>S</b> 1	Е	LE	

<sup>8</sup>Syn: Ptilimnium nodosum (Rose) Mathias

<sup>9</sup>**Taxref**: Feist et al. 2012.

<sup>10</sup>**Taxnote**: Feist et al. resurrected the genus *Harperella* from within *Ptilimnium* based on an analysis of molecular markers and morphology. Inclusive of H. vivipara (Rose) and H. fluviatilis (Rose) for which Feist et al. found only marginal taxonomic evidence.

<sup>11</sup>Cons/Econote: Endangered via landscape-level changes in stream flows and rangewide habitat loss; restricted to two streams in Maryland.

<sup>12</sup>Habitat: Riverside bedrock scour bars.

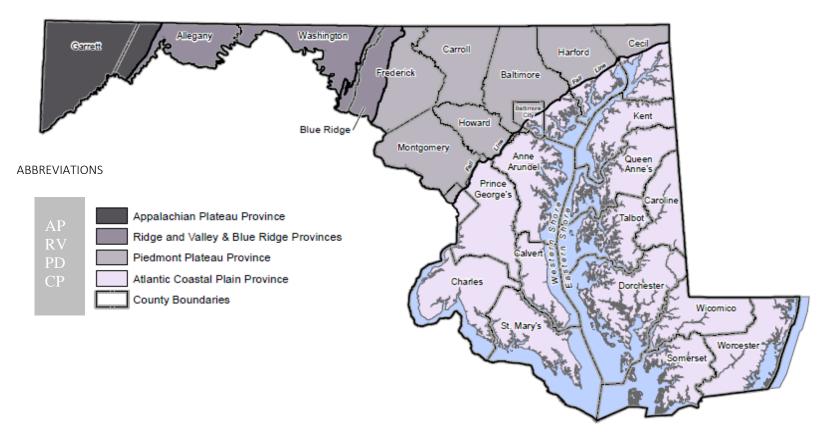
<sup>13</sup>**Distr**. RV (Allegany, Washington).

<sup>14</sup>Flw: Aug- Sept; Fr: Oct.

#### Key

- 1. Scientific name: the correct citation of a scientific name includes the author of the species. In this example that person was the American botanist Joseph Nelson Rose (1862-1928).
- 2. Common Name: common names in this document have been standardized to the common names utilized by NatureServe.
- 3. Global Rank: refers to the conservation rank of the plant throughout its range. See Table 1 for definitions.
- 4. State Rank: refers to the conservation rank in Maryland. See Table 1 for definitions.
- 5. State Status: refers to the legal protection status of a species under the Maryland Nongame and Endangered Species Conservation Act. See Table 2 for definitions.
- 6. Federal Status: refers to legal protection status of a species as determined by the U.S. Fish and Wildlife Service's Office of Endangered Species, in accordance with the federal Endangered Species Act. See Table 2 for definitions.
- 7. Scientific family name (common family name): the scientific (Latin) name of the plant family followed by its common name in parentheses.
- 8. Syn: refers to synonyms for scientific names that have been used in other lists, floras, and manuals.
- 9. Taxref: a taxonomic reference may be provided for the name(s) used in this document when the treatment differs from Weakley (2012) or when reference to a primary literature source may be helpful to the reader. Full citations, (e.g., author, year, title, journal) may be found in the Literature Cited.
- 10. Taxnote: taxonomic notes are provided (when needed) to detail the taxonomic treatment used in this document.
- 11. Cons/Econote: conservation and ecology notes are provided for most species in order to relate factors influencing conservation ranks and statuses.
- 12. Habitat: refers to a summary of the known habitats for the species in Maryland.
- 13. Distr: provides the distribution of the species by Physiographic Province (see Figure 2) followed by the documented county distribution in parentheses.
- 14. Flw: Fr: flowering (Flw) and fruiting (Fr) periods are provided for species for which we have precise data.

Figure 2. Generalized map of Maryland physiographic provinces and county boundaries



<sup>\*</sup> In the map above the Blue Ridge Province is included within the larger Ridge and Valley Province. Detailed maps of Physiographic Provinces and smaller subdivisions are available from the Maryland Geological Survey. See section, Additional Resources and Important Links, for links to information regarding Maryland physiography.

# Rare, Threatened, and Endangered Plants of Maryland

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# **Species Treatments**

"The reviewer cannot refrain from mentioning the subject of common names, although there is really little to say except that the manufacture of 'English' names has been continued with unabated zeal."

Quote from H. H. Bartlett in his review of the second (1913) edition of <u>An Illustrated Flora of the northern United States, Canada and the British Possessions</u> by Nathaniel Lord Britton (1859-1934) and Hon. Addison Brown (1830-1913) that appeared in the December 1913 issue of Rhodora (vol. 15, p. 224).

Scientific Name	Common Name	Global Rank	State Rank		Federal Status
Abies balsamea (Linnaeus) P. Mill Pinaceae (Pine Family) Cons/Econote: Peripheral in Maryland; isolated occurrences with Habitat: Mesic coves and outcrops at higher elevations. Distr. AP (Garrett). Flw: May-Jun; Fr: late Aug-Sept.	Balsam Fir	G5	S1	Status	Status
Aconitum uncinatum Linnaeus Ranunculaceae (Buttercup Family) Cons/Econote: Endangered by habitat loss. Excessive deer brows Habitat: Rich, montane alluvial woods and river banks. Distr. AP (Garrett). Flw: Aug; Fr: Sept-Oct.	Blue Monkshood se limits reproduction at some	G4 sites.	S1	Е	
Actaea podocarpa A.P. de Candolle  Ranunculaceae (Buttercup Family)  Syn: Cimicifuga americana Michaux  Cons/Econote: Endemic to southern and central Appalachians; Maryland populations are confined to a narrow geographic area.  Habitat: Rich montane forests.  Distr. AP (Garrett).  Flw: Aug; Fr: Sept.					
Adlumia fungosa (Aiton) Greene ex Britton, Sterns & Poggenburg  Climbing Fumitory G4 S2 T  Fumariaceae (Fumitory Family)  Cons/Econote: This species reaches highest density in open-canopy habitats and thus faces increased competition with invasive species.  Habitat: Rocky woodlands, cliffs and outcrops over mafic to slightly acidic siltstones, sandstones and shales, and sometimes found growing—strikingly—in small amounts of organic soil on the tops of boulders.  Distr. AP, PD*, RV (Allegany, Baltimore*, Frederick, Garrett, Washington).  Flw: late Jul-Sept; Fr: Sept-Nov.					
Aeschynomene virginica (Linnaeus) Britton, Sterns & Poggen Fabaceae (Legume Family)	<b>burg</b> Sensitive Joint-vetch	G2	<b>S</b> 1	Е	LT

**Cons/Econote**: Endangered by habitat loss, stream sedimentation and to an unknown extent, sea level rise associated with global warming. See Tyndall (2011) for monitoring data on Maryland populations. The use of a drone and aerial imagery has greatly facilitated our population monitoring in these difficult-to-survey habitats.

**Habitat**: Fresh tidal marshes.

**Distr**. CP (Calvert, Charles, Prince George's, Somerset, Wicomico\*).

Flw: mid Aug-early Oct: Fr: Sept-Oct.

#### Agalinis acuta Pennell

Sandplain Gerardia G1 S1 E

Orobanchaceae (Broomrape Family)

Syn: Agalinis decemloba (Greene) Pennell

**Taxnote**: Pettingill and Neel (2011) found insufficient evidence to support the evolutionary distinctiveness of *A. acuta* recommending synonymizing under *A. decemloba* but continued federal protection under the Endangered Species Act.

**Cons/Econote**: Endangered by habitat loss and fragmentation of historically connected barrens, fire exclusion, and white-tail deer herbivory.

**Habitat**: Remnant grassland and barrens (savannas) over ultramafic (serpentine) to acidic (sand) substrates.

**Distr**. CP, PD (Baltimore, Prince George's\*).

Flw: mid-Sept; Fr: late Sept-Oct.

#### Agalinis auriculata (Michaux) Blake

Earleaf False Foxglove G3 S1 E

Orobanchaceae (Broomrape Family)

**Cons/Econote**: Endangered by habitat loss and displacement by invasive species. **Habitat**: Meadows and woodland borders over mafic or calcareous substrates.

Distr. CP, PD, RV (Frederick, Montgomery, Prince George's).

Flw: mid Sept; Fr: Oct-Nov.

#### Agalinis obtusifolia Rafinesque

Ten-lobe False Foxglove G4G5Q SH X

Orobanchaceae (Broomrape Family)

**Taxnote**: Pettingill and Neel (2011) demonstrated that *A. obtusifolia* is distinct from *A. decemloba* and that the subsuming of *A. decemloba* under *A. obtusifolia* is in error.

**Cons/Econote**: The species appears to have been frequently collected from about 1902-1937 within a 60 km radius of the District of Columbia. All of these collections were made from areas that are currently heavily urbanized and all are presumed extirpated. The decline in Maryland populations is mirrored by a widespread regional decline. The late F. W. Pennell, a noted *Agalinis* expert, made several collections of *A. obtusifolia* from the District of Columbia and from Prince George's County in the early 1900s. Despite the taxonomic confusion, *A. obtusifolia* is firmly established as a historical component of the Maryland flora.

**Habitat**: Sandy barrens and woodland glades.

LE

**Distr**. CP\*, PD? (MD records are a heterogeneous assemblage of perhaps several species: Baltimore?, Calvert?, Charles?, Howard?,

Montgomery?, Prince George's\*). **Flw**: mid Sept-early Oct; **Fr**: Oct.

Agalinis setacea (J.F. Gmelin) Rafinesque

Threadleaf Gerardia

G5?

S2 E

Orobanchaceae (Broomrape Family)

Thread-leaved Gerardia

Cons/Econote: Endangered by habitat loss, woody succession of barrens habitat and poor protection status of several populations.

Habitat: Sandy fields and roadsides, inland sand dune and ridge woodlands.

**Distr**. CP (Anne Arundel\*, Baltimore\*, Calvert, Caroline, Charles, Montgomery\*, Prince George's\*, Talbot\*, Wicomico, Worcester).

Flw: early-mid Sept; Fr: late Sept-Oct.

#### Agalinis skinneriana (A. Wood) Britton

Pale False Foxglove

G3G4

S1 E

Orobanchaceae (Broomrape Family)

**Taxnote**: Pettingill and Neel (2008) confirmed that Maryland plants were sister to the sample from Missouri (within the core range of the species) but indicate that further investigation may be warranted to determine if the Maryland populations are actually an unrecognized species, as our populations are striking disjuncts from Midwestern prairies.

Cons/Econote: Endangered by habitat loss, damage by off-road vehicles and woody succession of barrens habitat.

Habitat: Sandy roads, barrens and fields.

Distr. CP: (Charles, Dorchester, Prince George's).

Flw: Aug-Sept; Fr: Sept-Oct.

#### Agastache scrophulariifolia (Willdenow) Kuntze

Purple Giant-hyssop

G4

G5

S1S2 T

**S**1?

Lamiaceae (Mint Family)

**Cons/Econote**: Threatened by alteration of edge habitats by invasive species and excessive deer browse.

**Habitat**: Forest clearings, field edges, roadsides.

**Distr**. PD, RV (Baltimore\*, Carroll?, Frederick, Washington?; distribution likely incomplete).

Flw: late Jul-Aug; Fr: Sept-Oct.

#### Agrimonia microcarpa Wallroth

Small-fruited Agrimony

Rosaceae (Rose Family)

Cons/Econote: The distribution of this species in Maryland is enigmatic. Historically this species has been reported as far west as Washington County (Shreve et al. 1910) and as far north as northern Cecil County (Reed 1986) but is currently known from the Coastal Plain as far south as Dorchester County. This species occupies a wide range of geological substrates from strongly acid to ultramafic. Habitat at the largest known population is unremarkable and there appears to be much habitat available for the species indicating perhaps that habitat and survey prescriptions need re-evaluation. Additionally, the Service has noted broad fluctuations in population size that are not associated with changes in habitat.

**Habitat**: Dry-mesic oak and dry pine-oak forests and woodlands over rocky, sandy or gravelly substrates.

Distr. CP, PD, RV? (Anne Arundel\*, Caroline, Cecil\*, Charles, Dorchester, Frederick?, Howard, Washington?).

Flw: Aug-Sept; Fr: Sept-Oct.

Agrimonia striata Michaux

Woodland Agrimony

G5

S1 E

Rosaceae (Rose Family)

Cons/Econote: Endangered by habitat loss and displacement by invasive species.

Habitat: Basic mesic forests, rich bottomland forests.

**Distr**. CP\*, PD, RV (Allegany, Baltimore, Cecil\*, Howard\*, Prince George's\*).

Flw: mid Aug-early Sept; Fr: Sept-Oct.

Aletris aurea Walter Golden Colicroot G5 SH X

Nartheciaceae (Bog-asphodel Family)

**Cons/Econote**: Maryland populations represented the northern extent of the southeastern coastal range. Last collected in 1918 and presumed extirpated.

**Habitat**: Acidic seepage wetlands. **Distr**. CP\* (Prince George's\*).

Alnus maritima (Marshall) Muhlenberg ex Nuttall!

Seaside Alder

G3

S3.1

Betulaceae (Birch Family)

**Taxnote**: Maryland and Delaware plants are ssp. maritima. See Schrader & Graves (2004) for discussion of the subspecies.

Cons/Econote: Endemic to the Delmarva Peninsula in four Maryland counties and Sussex County, Delaware (erroneously reported from Kent County, DE). Locally abundant and comprising distinctive shrubland and woodland natural communities along tidal rivers and occasionally old millponds (Harrison and Stango 2003). See Shreve et al. (1910, p. 128, 424) for a historical discussion of the association with Atlantic White Cedar and the distribution of this species in Maryland. The species is particularly susceptible to salt water intrusion (Schrader & Gallagher 2003), thus, past hurricanes and accompanying storm surge may be responsible for the current distribution. Sealevel rise and saltwater intrusion after 'Sandy' is responsible for the extirpation of a population in Delaware (W. McAvoy, pers. comm.). Under review for federal listing in 2016-2017.

**Habitat**: Ecotones between fresh tidal marshes and tidal swamps, open-canopy Atlantic white cedar swamps. As a matter of coincidence, specimens have not been collected on the Somerset County side of Dividing Creek but the plant is abundant on the Worcester County side.

Distr. CP (Dorchester, Somerset?, Wicomico, Worcester).

Flw: Jul; Fr: mid Aug-early Oct.

Amaranthus pumilus Rafinesque

Seabeach Amaranth

G2

**S**1

E

LT

Amaranthaceae (Amaranth Family)

Scientific Name Global State State Federal Rank Rank Status Status

**Cons/Econote**: Extirpated from much of its historic range (Hancock & Hosier 2003); this species occupies dynamic coastal beach habitat that has been altered by decades of coastal development. Rediscovered on Assateague Island in 1998 after 31 years of absence (Tyndall et al. 2000).

Habitat: Barrier island beaches, foredunes.

**Distr.** CP (Worcester).

Flw/Fr: Jul-Sept.

#### Amelanchier humilis Wiegand

Running Shadbush

G5

S1 T

Rosaceae (Rose Family)

**Taxnote**: A widespread species in the northeastern U.S. having both diploid and polyploid populations (Burgess et al. 2014). Maryland populations are near the southern terminus of the species' range and some plants were determined to be triploid.

Cons/Econote: Threatened by competition and displacement by non-native, invasive shrubs, particularly Lonicera maackii.

**Habitat**: Outcrops of limestone or other calcium-bearing substrates.

Distr. RV (Allegany, Washington).

Flw: early May; Fr: Jun.

#### Amelanchier nantucketensis Bicknell

Nantucket Shadbush

G3Q

**S**1

T

Rosaceae (Rose Family)

**Taxnote**: A widespread tetraploid (Burgess et al. 2014) in the northeastern U.S. with several striking disjuncts in the southeastern U.S., including Maryland.

**Cons/Econote**: Threatened by competition and displacement by invasive species and habitat alteration. Restricted to a small linear population along the Potomac Gorge.

Habitat: Ancient bedrock scour bar terraces and cliff faces.

**Distr**. PD (Montgomery). **Flw**: mid Apr; **Fr**: May-Jun.

#### Amelanchier sanguinea (Pursh) A.P. de Candolle

Roundleaf Serviceberry

G5

S1 E

Rosaceae (Rose Family)

Roundleaf Shadbush

**Taxnote**: Comprising a complex group of morphologies and ploidy levels across the species' range in the eastern U.S. (Burgess et al. 2014). Maryland plants are tetraploid.

Cons/Econote: Endangered by habitat loss and displacement by invasive species.

**Habitat**: Outcrops of calcareous shale or limestone.

Distr. AP, RV (Allegany, Garrett).

Flw: early May; Fr: Jun.

# Scientific Name Common Name Rank Rank State State Federal Rank Rank Status Status Status Status

Rosaceae (Rose Family)

Syn: A. stolonifera Wiegand

**Taxnote**: A widespread, tetraploid apomict of the northeastern U.S. (Burgess et al. 2014; Campbell et al. 2014).

Cons/Econote: Intolerant of shade, Maryland plants are restricted to a narrow zone of (chiefly) acidic sandstone glades.

Habitat: Outcrops of acidic rock, sandstone glades.

**Distr.** AP, PD\*, RV (Allegany, Frederick, Howard\*, Washington).

Flw: late Apr-early May; Fr: Jun.

#### Amianthium muscitoxicum (Walter) A. Gray

Fly-poison

G4G5

**S**2

Melanthiaceae (Bunchflower Family)

Syn: A. muscaetoxicum, an orthographic variant.

**Cons/Econote**: Upgraded from the Watchlist (S3) in 1999 based upon observed declines in range and population size due to heavy browse by white-tailed deer, and encroachment of invasive species. The Service requests additional information to evaluate this species' conservation status.

**Habitat**: Sandy or rocky knolls in open, dry-mesic forests.

Distr. AP\*, CP, PD, RV (Anne Arundel, Baltimore, Cecil, Charles, Dorchester, Frederick, Garrett\*, Harford, Prince George's\*,

Washington).

Flw: late May-mid Jun: Fr: Aug-Sept.

#### Ammannia latifolia Linnaeus

Koehne Ammannia

G5

**S**2

Lythraceae (Loosestrife Family)

**Cons/Econote**: Recent surveys have failed to find this species in previously occupied habitat. Saltwater intrusion into baymouth barrier wetlands (Sipple 1982) is suspected to be associated with the decline at one site; however, other sites that are clearly brackish are extant. **Habitat**: Brackish to fresh tidal marshes.

Distr. CP (Baltimore\*, Calvert, Cecil\*, Charles\*, Dorchester, Kent, Queen Anne's, Somerset, St. Mary's\*, Worcester).

Flw: Aug-Sept; Fr: Oct.

#### Amphicarpum amphicarpon (Pursh) Nash

Blue Maidencane

G4

**S**3

Poaceae (Grass Family)

Syn: Amphicarpum purshii Kunth

Cons/Econote: An Atlantic Coastal Plain endemic, restricted to the lower Eastern Shore in Maryland but often locally abundant.

Habitat: Sandy soils, frequent in clearings under powerlines and edges of pine flatwoods.

Distr. CP (Wicomico, Worcester).

Flw/Fr: Sept.

Scientific Name	Common Name	Global Rank	State Rank		Federal Status
Anagallis minima (Linnaeus) E.H. Krause Primulaceae (Primrose Family) Syn: Centunculus minimus Linnaeus Lysimachia minima (L.) U. Manns & Anderb.	Chaffweed	G5	SU	X	
Cons/Econote: An irregularly occurring but widespread (in Normaryland collection dates range from 1897 to 1925, perhaps ove <b>Habitat</b> : Meadows, moist soils.  Distr. CP* (Charles*, Prince George's*).		apparently very	rare in t	he easte	rn U.S.
Anaphalis margaritacea (Linnaeus) Bentham & Hooker f. Asteraceae (Aster Family) Habitat: Dry to moist gravelly or sandy soils, old fields and cleatistr. AP, PD*, RV (Cecil*, Frederick, Garrett). Flw: Jul-Aug; Fr: Aug-Sept (Oct).	Pearly Everlasting arings.	G5	<b>S</b> 3		
Anemone canadensis Linnaeus Ranunculaceae (Buttercup Family) Cons/Econote: Apparently very rare in the southeastern U.S; tw Habitat: Mesic hardwood forests. Distr. CP* (Harford*, Prince George's*).	Canada Anemone o Maryland collections dated	G5 1879 and 1898.	SH	X	
Anemone lancifolia Pursh Ranunculaceae (Buttercup Family) Taxnote: Intergrades with the more common A. quinquefolia. Cons/Econote: Endemic to the southern and central Appalachian precision. Habitat: Basic mesic forest (calcareous shale). Distr. RV (Allegany). Flw: early May; Fr: June	Mountain Thimbleweed as; the status of this species in	G5 Maryland has n	S1?	determi	ned with
Angelica atropurpurea Linnaeus Apiaceae (Carrot Family)	Great Angelica	G5	SH	X	

Apiaceae (Carrot Family)

Cons/Econote: Known from a single collection dated 1941.

Habitat: Shell-marl. **Distr**. CP\* (Calvert\*). Scientific Name
Common Name
Rank
Rank
State
State
Federal
Rank
Rank
Status
Status
Status
Status

Apiaceae (Carrot Family)

Cons/Econote: A southern and central Appalachian endemic. Endangered by habitat loss.

**Habitat**: Rich, mesic northern hardwood forests; Appalachian fens.

Distr. AP (Garrett).

Antennaria solitaria Rydberg

Single-head Pussytoes G5 S2

T

Asteraceae (Aster Family)

**Cons/Econote**: Known from a series of isolated populations, often in low numbers, and with few protected populations.

Habitat: Oak-beech-heath bluffs and woodlands often on steep, actively eroding slopes and occasionally on tip-up mounds of fallen trees.

Distr. CP (Anne Arundel, Calvert, Caroline, Cecil, Charles, Harford, Prince George's, Queen Anne's, Talbot, Worcester).

Flw: late Apr; Fr: May-Jun.

Anthoxanthum hirtum (Schrank) Y. Schouten & Veldkamp Vanilla Grass, Holy Grass G4G5 S1 E

Poaceae (Grass Family)

Syn: Hierochloe odorata (Linnaeus) P. Beauv.

Cons/Econote: Endangered by habitat loss, fire exclusion, and woody plant succession.

Habitat: Streambanks and seeps over serpentine.

**Distr**. PD (Baltimore). **Flw/Fr**: mid May

Arabis missouriensis Greene

see Boechera missouriensis (Green) Al-Shehbaz

Arabis patens Sullivant

Spreading Rockcress G3 S3

Brassicaceae (Mustard Family)

Habitat: Dry-mesic calcareous forests, boulderfield forests, northern hardwood forests.

Distr. AP, PD, RV (Allegany, Frederick, Garrett, Montgomery, Washington).

Flw: Apr-mid May; Fr: May-Jul.

Arabis pycnocarpa M. Hopkins var. adpressipilis M. Hopkins Hairy Rockcress G5T4Q S1S2

Brassicaceae (Mustard Family)

Syn: A. hirsuta (Linnaeus) Scopoli var. adpressipilis (M. Hopkins) Rollins

**Cons/Econote**: Populations are apparently very narrowly and linearly distributed along the Potomac River (see also Beckman 2003).

**Habitat**: Limestone outcrops and cliffs, basic mesic forest, rich boulderfield woodlands.

Distr. PD, RV (Montgomery, Washington; distribution likely incomplete).

Flw: Apr-May; Fr: May-Jul.

#### State State Federal Global Scientific Name Common Name Rank Status Status Rank Arabis pycnocarpa M. Hopkins var. pycnocarpa Western Hairy Rockcress G5T5 **S**1 Brassicaceae (Mustard Family) **Syn**: A. hirsuta var. pycnocarpa (M. Hopkins) Rollins **Cons/Econote**: Our knowledge of this species in Maryland is represented by a single collection. **Habitat**: Limestone bluff. **Distr**. RV (Washington). Flw: early May; Fr: late May-Jul. Arabis shortii (Fernald) Gleason see Boechera dentata (Rafinesque) Al-Shehbaz & Zarucchi **S**1 Ε Aralia hispida Ventenat Bristly Sarsaparilla G5 Araliaceae (Ginseng Family) Cons/Econote: Endangered by fire exclusion. According to Weakley (2015) this species appears to be strongly dependent on recurring disturbance, such as fire. **Habitat**: Dry, often rocky or sandy barrens. Distr. AP (Garrett). Flw: mid Jun-Jul; Fr: Aug. Aralia racemosa Linnaeus American Spikenard G4G5 **S2S4** Araliaceae (Ginseng Family) Cons/Econote: Added to the Maryland tracking list as a species of concern in 2012. Documented from a few areas and observed to occur in low numbers; some historical stations may have been extirpated. The Service requests additional information to evaluate this species' conservation status. **Habitat**: Basic mesic forest; openings amongst outcrops in rich soils. **Distr**. AP, CP\*, PD\*, RV (Allegany, Anne Arundel\*, Frederick, Garrett, Howard\*, Montgomery\*, Washington\*). Flw: late Jun-Jul; Fr: Sept. Arctostaphylos uva-ursi (Linnaeus) Sprengel Bearberry G5 **S**1 Е Ericaceae (Heath Family) **Cons/Econote**: Confined to a single relictual population that has declined in recent years. **Habitat**: Exposed summit of shale ridge. Distr. RV (Allegany). **Flw/Fr**: not observed.

Dragon's Mouth Orchid G4 SX X

Orchidaceae (Orchid Family) Swamp-pink

Arethusa bulbosa Linnaeus

**Cons/Econote**: Last seen in 1918 at Suitland Bog and known from the "magnolia bogs" as early as 1809 (McAtee 1922). The Queen Anne's County station reported by Reveal & Broome (1981) citing Shreve (1910) is an error; Shreve (1910) reported *Calopogon tuberosus* (as *Limodorum*) and not *Arethusa*. The species was collected in Maryland in the period from 1696-1700 by Krieg and Vernon, or Hugh Jones (British Museum of Natural History, London) (Reveal & Broome 1981).

Habitat: Fall Line terrace gravel bogs.

**Distr**. CP\* (Prince George's\*).

Flw: late May; Fr: Jul?.

#### Aristida lanosa Muhlenberg ex Elliott

Woolly Three-awn

G5

S1 E

Poaceae (Grass Family)

**Cons/Econote**: Endangered by conversion of barrens habitat to loblolly pine plantations, and limited to a few extant populations. Fire suppression may play a role in this species' rarity.

**Habitat**: Dry sandy openings of inland sand dunes and ridges.

**Distr**. CP, PD\* (Anne Arundel?, Calvert\*, Dorchester, Howard?, Montgomery\*, Worcester).

Flw/Fr: Sept-Oct.

#### Aristida tuberculosa Nuttall

Seabeach Needlegrass

G5

**S**3

Poaceae (Grass Family)

Cons/Econote: Restricted in Maryland to Assateague Island but frequent in habitat (Lea et al. 2000).

Habitat: Dry, open woodlands and dwarf shrublands dominated by *Hudsonia tomentosa*.

**Distr**. CP (Worcester). **Flw/Fr**: late Aug-Sept.

#### Aristida virgata Trinius

Wand-like Three-awn Grass G5

S1S2 E

Poaceae (Grass Family)

Syn: A. purpurascens Poiret var. virgata (Trinius) Allred

Cons/Econote: Endangered by woody succession of open barrens habitat and herbicide applications at unprotected sites.

**Habitat**: Seasonally wet to dry sandy and/or peaty soils of clearings and acidic seeps.

Distr. CP (Wicomico, Worcester).

Flw/Fr: Sept-Oct.

Aristolochia macrophylla Lamarck

see Isotrema macrophyllum (Lamarck) C.F. Reed

Armoracia lacustris (A. Gray) Al-Shehbaz & V. Bates

Lake-cress

G4?

S1 E

Brassicaceae (Mustard Family)

Taxref: Fernald 1950.

State State Federal Global Scientific Name Common Name Rank Status Status Rank

Syn: Rorippa aquatica (Eaton) E.J. Palmer & Stevermark

Armoracia aquatica (Eaton) Wiegand

Neobeckia aquatica (Eaton) Greene

**Taxnote**: As evidenced from the list of synonyms above, this species has been placed under many different genera. This evidence has not been reviewed and here follows the familiar treatment as Armoracia.

Cons/Econote: Known only from sites along the Potomac River and represented by very few plants. Endangered by habitat loss likely precipitated by changes in historical patterns of flooding along the Potomac. Wiegand (2010) also cites excessive deer browse and displacement by invasive plants.

**Habitat**: Marsh in muck soils.

**Distr**. PD (Montgomery).

Flw: Jun; Fr: Jun-Jul.

#### Arnica acaulis (Walter) Britton, Sterns, & Poggenburg

Leopard's-bane

G4

S1

Е

Asteraceae (Aster Family)

Cons/Econote: A rare species of Pine Barrens and grasslands. Endangered by habitat loss and conversion; the majority of our records are historical (1874-1965).

Habitat: Seepage meadow underlain by ultramafic substrate.

**Distr.** CP\*, PD (Baltimore, Montgomery\*, Prince George's\*, St. Mary's\*).

Flw: early Jun; Fr. Jun-Jul.

#### Arnoglossum reniforme (Hooker) H.E. Robinson

Great Indian-plantain

G4

SHX

Asteraceae (Aster Family)

Syn: Cacalia muehlenbergii (Schultz-Bipontius) Fernald

**Taxnote**: The genus *Cacalia* corresponded to a heterogeneous mix of at least eight different genera and the name was rejected in order to prevent confusion.

Cons/Econote: Last collected in 1958.

Habitat: Rich alluvial woods.

**Distr**. PD\* (Baltimore\*, Montgomery\*).

#### Aronia prunifolia (Marshall) Rehder

Purple Chokeberry

G4G5Q

S3

Rosaceae (Rose Family)

Syn: Photinia floribunda (Lindley) J.B. Phipps

Aronia ×floribunda (Marshall) Rehder

Pyrus floribunda Lindley

**Taxnote**: According to Weakley (2015) this taxon occurs outside of the ranges of its parents (*A. melanocarpa x A. arbutifolia*) and should be treated as an independent lineage. Sometimes combined with *Photinia*; however, support for combining these two genera is weak (see Potter et al. 2007; Campbell et al. 2007).

Habitat: Acidic seepage swamps.

Distr. AP, CP, PD, RV (Allegany, Anne Arundel, Baltimore, Cecil, Dorchester, Garrett, Howard, Montgomery, Prince George's, St.

Mary's, Washington, Wicomico, Worcester; distribution likely incomplete).

Flw: Jun; Fr: Aug-Sept.

#### Arundinaria tecta (Walter) Muhlenberg

Switch Cane

G5

**S**2

Poaceae (Grass Family)

**Syn**: *A. gigantea* (Walter) Muhlenberg *A. gigantea* ssp. *tecta* (Walter) McClure

**Taxnote**: Maryland plants have been treated as a subspecies of *A. gigantea* and as a species, as treated here. *A. tecta* has a smaller stature than *A. gigantea* and reportedly these species have different life-histories.

**Habitat**: Fresh tidal swamp forests, acidic seepage swamps.

Distr. CP (Anne Arundel, Baltimore, Charles, Dorchester, Howard, Kent\*, Prince George's, Worcester\*).

Flw/Fr: (rarely)

# Asclepias lanceolata Walter

Smooth Orange Milkweed G5

**S**1

Apocynaceae (Dogbane Family)

**Cons/Econote**: Reported as occurring frequently in Worcester County (Brown & Brown 1984); this has not been the assessment of staff and cooperators over the last 30 years. This may be evidence of a rapid decline; however, it may also be evidence of difficult-to-survey habitats.

**Habitat**: Fringing areas of emergent vegetation in fresh tidal habitats.

**Distr**. CP (Dorchester, Worcester).

Flw: Jul; Fr: Aug-Oct.

# Asclepias purpurascens Linnaeus

Purple Milkweed

G5

**S**2

Apocynaceae (Dogbane Family)

**Cons/Econote**: Occurring as scattered populations and generally in low numbers. Habitat conditions do not appear to be overly restrictive but documented stations for this species are scarce.

Habitat: Meadows, thickets and clearings in rich (often alluvial) soils.

Distr. CP, PD, RV (Cecil, Frederick, Harford, Montgomery, Talbot).

Flw: Jun-Sept; Fr: Sept-Nov.

# Scientific Name Common Name Rank Rank State Federal Rank Asclepias rubra Linnaeus Red Milkweed G4G5 S1 E

Apocynaceae (Dogbane Family)

**Cons/Econote**: Endangered by habitat loss and alteration via woody succession and herbicide use in some populations.

Habitat: Open-canopy acidic seepage wetlands and sandy/peaty meadows (chiefly powerline rights-of-way).

Distr. CP, PD\*, RV\*? (Baltimore, Caroline\*, Carroll\*, Dorchester, Frederick\*?, Prince George's, Wicomico, Worcester).

Flw: early to mid Jul; Fr: Aug-Sept.

#### Asclepias verticillata Linnaeus

Whorled Milkweed

G5

**S**3

Apocynaceae (Dogbane Family)

**Habitat**: This species occurs in a variety of dry, open-canopy barrens, thin-canopied woodlands and outcrops and over a variety of substrates ranging from acidic (dry sands) to mafic (limestone, shale) and ultramafic substrates (serpentine). The coastal stations, which were presumably fire-maintained barrens, are considered extirpated.

**Distr**. CP\*, PD, RV (Allegany, Baltimore, Cecil, Charles\*, Frederick, Harford, Montgomery, Prince George's\*, St. Mary's\*, Worcester\*).

Flw: mid Jul-Aug; Fr: Sept-Oct.

#### Asplenium bradleyi D.C. Eaton!

Bradley's Spleenwort

G4

S1 X(PT)

Aspleniaceae (Spleenwort Family)

**Taxnote**: *Asplenium* form a well-studied complex of species involving the interplay between hybridization and polyploidy that directs evolution in this genus. This species is a fertile allotetraploid derived from hybridization between *A. montanum* and *A. platyneuron*. **Cons/Econote**: A general decline in occupied habitat has occurred over the last 50 years. Currently restricted to two extant stations. The historical location (Alberton) that has been georeferenced to Howard County may be a general placename used by the collector (F.H. Knowlton, September 1897) and not the site of collection, which may actually be on the Baltimore County side of the Patapsco River. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Narrow, sheltered rock crevices over acidic (gneiss, schist) substrates having inclusions of Cockeysville marble.

**Distr**. PD (Baltimore, Harford, Howard?\*).

**Phenology**: plants are most visible late Feb-May (Jun), detectability varies according to spring precipitation (P. Stango, pers. comm.).

#### Asplenium pinnatifidum Nuttall

Lobed Spleenwort

G4

Е

**S**1

Aspleniaceae (Spleenwort Family)

**Taxnote**: Asplenium form a well-studied complex of species involving the interplay between hybridization and polyploidy that directs evolution in this genus. Davis (2014) provides a valuable discussion of taxonomic complexity at one Maryland site where A. pinnatifidum, A. montanum, A. x trudelli Wherry (a sterile triploid hybrid, montanum x pinnatifidum) and other intermediate forms occur.

**Cons/Econote**: Occurring in specialized habitats and always in very low numbers. According to Weakley (2015) this species is a fertile allopolyploid derived from hybridization between *A. montanum* and *A. rhizophyllum*. The parent species have very different habitat preferences and this may be one factor in the species' rarity.

**Habitat**: Outcrops of sandstone, quartizite, phyllite and other felsic rocks.

**Distr**. PD, RV (Allegany, Baltimore, Cecil\*, Frederick, Harford, Montgomery, Washington).

**Phenology**: plants are visible from May-Oct (Davis 2014).

#### Asplenium resiliens Kunze!

Black-stem Spleenwort

G5

S1 E(PD)

Aspleniaceae (Spleenwort Family)

Cons/Econote: Listing of a sterile triploid hybrid is problematic; Barrington (2011) provides a valuable discussion. The key variable to listing of a hybrid taxon is whether the lineage has a unique gene pool that could be lost by extinction. Two characteristics are required: (1). The lineage needs to be capable of at least limited sexual reproduction and (2). Genetically isolated from other lineages so that it has a discrete evolutionary fate. *Asplenium resiliens* meets neither of these criteria. Apomixis is obligate, thus the triploid taxa are not capable of sexual reproduction and the lineage contains only genetic variation present in other diploid progenitors so that there is no unique combination of germplasm in *A. resiliens*. However, the taxon is rare in Maryland and deserving recognition in that it occurs as a component of an ecological community. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Limestone cliffs.

**Distr**. RV (Washington).

### Asplenium ruta-muraria Linnaeus

Wallrue Spleenwort

G5

**S**3

Aspleniaceae (Spleenwort Family)

**Taxnote**: North American plants are var. *cryptolepis* (Fernald) Wherry

**Cons/Econote**: Occurring in scattered locations on mafic outcrops, this species may be affected by competition with invasive species, particularly exotic honeysuckles, *Lonicera maackii* and *L. japonica*.

**Habitat**: Limestone bluffs or other mafic outcrops.

Distr. AP, RV (Allegany, Garrett, Washington).

#### Astragalus canadensis Linnaeus

Canadian Milkvetch

G5T5

Е

S1

Fabaceae (Legume Family)

**Taxnote**: Maryland plants are the wide-ranging var. *canadensis*.

**Cons/Econote**: Endangered by habitat loss and excessive browse by white-tailed deer. Maryland stations could scarcely be called populations, rather scattered plants at six locations.

Habitat: Scoured bedrock terraces, rocky dry woodlands.

Distr. AP, PD, RV (Allegany, Frederick, Garrett, Montgomery).

Flw: Jul; Fr: late Jul-Aug.

#### Astragalus distortus Torrey & A. Gray

Ozark Milkvetch

G5

S2 T

Fabaceae (Legume Family)

**Taxnote**: This species occurs in two disjunct areas in the U.S.; one population centered around the Ozarks and the other in the central Appalachians (MD, VA and WV). Eastern plants are var. *distortus* but taxonomic investigation is warranted.

Cons/Econote: Occurring in scattered, small populations under very specific habitat conditions. Piedmont stations not seen since 1939.

**Habitat**: Shale barrens and shale cliffs. **Distr**. PD\*, RV (Allegany, Montgomery\*).

Flw: late Apr-May; Fr: Jun-Jul.

#### Atriplex mucronata Rafinesque

Seabeach Orach

G5

S1S2

Chenopodiaceae (Goosefoot Family)

Crested Saltbush

Syn: A. arenaria Nuttall

A. pentandra (Jacquin) Standley ssp. arenaria (Nuttall) Hall & Clements

A. cristata Humboldt and Bonpland ex Willdenow

**Taxref**: An understanding of the geographic distribution of these seabeach taxa is poorly developed but is treated here as in Weakley (2015) as occurring along the Atlantic Coastal Plain from New Hampshire to Florida, west to Texas.

**Taxnote**: This species has been treated under a variety of names (and Families) and Maryland specimens require careful study.

**Cons/Econote**: Widespread on Assateague Island but numbers fluctuate from year to year. Lea et al. (2000) suggest that this species, like many seabeach annuals, is dependent upon natural disturbances, particularly storm overwash.

Habitat: Overwash flats and bayside salt marshes.

**Distr**. CP (St. Mary's\*, Worcester).

### Aureolaria flava (Linnaeus) Farwell

Smooth Yellow False Foxglove G5

**S**3

SU

Scrophulariaceae (Figwort Family)

Cons/Econote: The Service requests additional information to evaluate this species' conservation status and distribution.

Habitat: Upland oak forests and woodlands, river bluffs, rocky forested slopes.

Distr. AP, CP\*, PD, RV (Allegany, Baltimore, Cecil, Frederick\*, Garrett, Howard, Montgomery, Prince George's\*, Washington;

distribution likely incomplete). **Flw**: late Jul-mid Aug; **Fr**: Sept.

#### Aureolaria laevigata (Rafinesque) Rafinesque

Downy Yellow Foxglove

G5

Scrophulariaceae (Figwort Family)

Cons/Econote: The Service requests additional information to evaluate this species' conservation status and distribution.

**Habitat**: Rich woods, river bluff forests, rocky slopes.

**Distr**. AP, PD, RV (Allegany, Frederick\*, Garrett, Montgomery; distribution likely incomplete).

Flw: late Jul-mid Aug; Fr: Sept.

		Global	State State Federal
Scientific Name	Common Name	Rank	Rank Status Status
Axonopus furcatus (Flügge) A.S. Hitchcock	Big Carpetgrass	G5	S2?

Poaceae (Grass Family)

**Cons/Econote**: Long considered extirpated, this species has been recently located in unremarkable habitat. See Knapp et al. (2011) for details regarding the rediscovery of this species.

Habitat: Sandy roadsides, ditches, powerlines.

Distr. CP (Somerset, Worcester).

Flw/Fr: late Aug-Oct.

#### Bacopa innominata (G. Maza) Alain

Tropical Water-hyssop G3G5 SH X

Scrophulariaceae (Figwort Family) **Cons/Econote**: Last collected in 1938.

Habitat: Fresh tidal shores and mudflats.

**Distr**. CP\* (Wicomico\*).

# Baptisia australis (Linnaeus) R. Brown

Blue Wild Indigo G5 S2 T

Fabaceae (Legume Family)

**Taxnote**: Maryland populations represent the poorly defined var. *australis*.

Cons/Econote: Restricted to the Potomac River in Maryland in a number of widely scattered small populations.

**Habitat**: Prairie-like scour bars, depositional bars, rocky alluvial flats.

**Distr**. CP<sup>I</sup>, PD, RV (Montgomery, Prince George's\*<sup>I</sup>, Washington; widely planted).

Flw: May; Fr: late Jun-Aug.

#### Bartonia paniculata (Michaux) Muhlenberg

Twining Screwstem

G5T5

**S**3

Gentianaceae (Gentian Family)

**Taxnote**: Maryland plants are ssp. *paniculata*.

Habitat: Acidic seepage wetlands, in saturated, often peaty soils.

**Distr**. AP, CP, RV\* (Anne Arundel, Calvert, Cecil, Charles, Frederick\*, Garrett, Kent, Prince George's, St. Mary's, Talbot, Wicomico, Worcester).

Flw: Aug-Sept; Fr: Oct.

### Betula populifolia Marshall

Gray Birch

G5

S1?

Betulaceae (Birch Family)

**Cons/Econote**: Nativity to Maryland is arguable. As a pioneer species it may occur in habitats that have low conservation value, e.g., quarries, along railroads and other heavily disturbed sites that resemble previously glaciated habitats. However, this plant may be native in Fall Line seeps in habitats similar to those in the New Jersey Pine Barrens.

State State Federal Global Common Name Rank Status Status Scientific Name Rank Habitat: Quarries, roadsides, acidic seeps. Distr. CP, PD (Baltimore, Cecil, Howard, Prince George's). Bidens bidentoides (Nuttall) Britton Maryland Bur-marigold S3.1 G3G4 Asteraceae (Aster Family) Syn: B. mariana Blake B. bidentoides (Nuttal) Britton var. mariana (S.F. Blake) Sherrf Cons/Econote: A regional endemic (New York, Pennsylvania, New Jersey and Delaware) Maryland populations in the upper Chesapeake Bay comprise the core populations. **Habitat**: Fresh tidal marshes. **Distr**. CP (Cecil, Harford). Flw: late Aug-early Sept; Fr. Sept. Bidens trichosperma (Nuttall) Britton Tickseed Sunflower G5 **S2S3** Asteraceae (Aster Family) Syn: B. coronata (Linnaeus) Britton, an invalid name Cons/Econote: Occurs extensively in the Nanticoke River marshes, more infrequent elsewhere. Habitat: Fresh to brackish tidal marshes, sea-level fens. **Distr.** CP (Anne Arundel, Baltimore, Caroline\*?, Charles, Dorchester, Harford\*?, Somerset, Talbot?, Wicomico). Flw: late Aug-mid Sept; Fr: Sept. Bidens mitis (Michaux) Sherrf Small-fruit Beggarsticks G4? **S**1 Ε

Asteraceae (Aster Family)

Cons/Econote: Endangered due to displacement by common reed (*Phragmites australis*), eutrophication and excessive sedimentation.

**Habitat**: Fresh tidal marshes, sea level fens.

**Distr**. CP (Anne Arundel, Calvert\*?, Dorchester, Harford\*?, Somerset, Wicomico, Worcester).

Flw: late Aug-early Oct; Fr: Sept-Oct.

Blephilia ciliata (Linnaeus) Bentham

**Downy Woodmint** G5 **S3S4** 

Lamiaceae (Mint Family)

**Habitat**: Dry to dry-mesic hardwood slopes and shale barren woodlands.

Distr. RV (Allegany, Frederick, Washington; distribution likely incomplete).

Flw: mid-late Jun; Fr: Aug.

Blephilia hirsuta (Pursh) Bentham Hairy Woodmint G5 SH

Lamiaceae (Mint Family)

State State Federal Global Common Name Rank Rank Status Status Scientific Name

Cons/Econote: Our knowledge of this species is limited to two historical vouchers listing only the county of collection. The species is likely to occur on the Allegheny Plateau and may be restricted to that physiographic province.

**Habitat**: Rich coves and northern hardwood forests.

**Distr**. AP/RV\* (Allegany\*).

#### Boechera dentata (Rafinesque) Al-Shehbaz & Zarucchi

Short's Rockcress

G5

**S**3

Brassicaceae (Mustard Family)

Syn: Arabis shortii (Fernald) Gleason

Arabis perstellata E. Braun var. shortii Fernald

Borodinia dentata (Rafinesque) P.J. Alexander & Windham

Cons/Econote: Habitats for this species are fragile and subject to multiple threats; in particular, populations require monitoring to detect declines associated with competition with multiple invasive exotic species.

**Habitat**: Floodplains and floodplain terraces and streambanks in sandy or silty substrates.

Distr. PD, RV (Cecil, Frederick, Harford, Montgomery, Washington).

Flw: late Apr-early May; Fr: Jun-Jul.

#### Boechera missouriensis (Greene) Al-Shehbaz

Missouri Rockcress

G5

S1

Ε

Brassicaceae (Mustard Family)

Svn: Arabis missouriensis Greene

Borodinia missouriensis (Greene) P.J. Alexander & Windham

Cons/Econote: A single known population endangered by displacement by invasive species, particularly exotic woody honeysuckle (Lonicera maackii) and Asiatic bittersweet (Celastrus orbiculatus).

**Habitat**: Ultramafic outcrop.

Distr. PD (Baltimore).

**Flw**: early-mid Apr; **Fr**: late Apr-May.

#### Boltonia asteroides (Linnaeus) L'Héritier var. asteroides

Susquehanna Doll's-daisy

G5TNR

**S**1

Asteraceae (Aster Family)

**Taxnote**: Townsend (2013) re-established a more restrictive taxonomic concept for this variety that is known only from the Susquehanna River in Maryland and Pennsylvania.

Cons/Econote: Historically collected along the Susquehanna in 1902 and 1924 from "Rocky islands on the Susquehanna", and hypothesized to have been perhaps extirpated by construction of the Conowingo Dam. Recently rediscovered by Jack Holt and Janet Ebert. This species will be the subject of intensive inventory and monitoring efforts in 2017.

**Habitat**: Scour-bar prairie.

**Distr**. PD (Harford).

#### State State Federal Global Common Name Rank Status Status Scientific Name Rank Boltonia asteroides (Linnaeaus) L'Héritier White Doll's-daisy G5T4T5 **S**1 E var. glastifolia (Hill) Fernald Aster-like Boltonia

Asteraceae (Aster Family)

Cons/Econote: Endangered by altered groundwater hydrology and woody succession of habitats.

**Habitat**: Delmarva Bays (Fenstermacher et al. 2014), acidic seepage swamps.

**Distr**. CP (Caroline, Queen Anne's, Somerset, Worcester).

Flw: late Jul-mid Aug; Fr: Aug-Sept.

#### Borrichia frutescens (Linnaeus) A.P. de Candolle

Sea Oxeye

G5

SH

X

Asteraceae (Aster Family)

Cons/Econote: Recorded only from Assateague Island and not seen since 1984; apparently the northern terminus of the species range.

Habitat: Salt marshes. **Distr**. CP\* (Worcester\*).

Botrychium multifidum and B. oneidense

see Sceptridium

### Botrychium lanceolatum (S.G. Gmelin) Angström var. angustisegmentum Pease & A.H. Moore!

Lanceleaf Grapefern

G5T4

S1

X

Ophioglossaceae (Adder's-tongue Family)

Syn: B. angustisegmentum (Pease & Moore) Fernald

**Taxnote**: According to Fernald (1915) this species is typically Appalachian whereas var. *lanceolatum* is a boreal plant not reaching the eastern U.S.

**Cons/Econote**: Collected by the late D.E. Redman, legal status under review pending field work.

**Habitat**: Mesic northern hardwood forest.

**Distr**. AP (Garrett).

#### Botrychium matricariifolium (A. Braun ex Duwell) A. Braun ex W.D.J. Koch

Chamomile Grapefern

G5

**S**1?

Ophioglossaceae (Adder's-tongue Family)

**Syn**: *B. matricariaefolium*, an orthographic variant.

**Taxnote**: An allopolyploid species derived from hybridization events between diploid parents, B. angustisegmentum and B. pallidum (Williams et al. 2016). Williams et al. (2016) describe morphological variability in this complex.

Cons/Econote: Reported in Reed (1953, 1962) as being found on the Piedmont Plateau, on the Coastal Plain adjacent to the Piedmont, and in the Allegheny mountains. The cryptic nature of the species suggests rarity; however, the Service suspects a substantial decline due to the heavy urbanization of much of the species' reported within-State range.

**Habitat**: Rich hardwood forests.

**Distr**. AP, CP, PD (Anne Arundel, Baltimore\*, Carroll?, Garrett, Howard, Montgomery\*, Prince George's; distribution likely incomplete).

### Botrychium simplex E. Hitchcock

Least Grapefern

G5

SH X

Ophioglossaceae (Adder's-tongue Family)

Syn: B. simplex var. tenebrosum (A.A. Eaton) R.T. Clausen

B. tenebrosum A.A. Easton

**Taxnote**: According to Wagner & Wagner (1993) the eastern *B. simplex* has a persistent juvenile form (*B. tenebrosum* A.A. Easton) corresponding to Maryland specimens.

**Cons/Econote**: Last collected (as var. *tenebrosum*) in 1942. E. Hitch (1927) discusses finding this rare species in Howard County as a student in 1888.

Habitat: Woodland glades.

**Distr**. PD\*, RV? (Frederick?, Howard\*, Montgomery\*).

### Bouteloua curtipendula (Michaux) Torrey

Side-oats Grama

G5

**S**2

Poaceae (Grass Family)

Cons/Econote: Known from many small to moderately large populations but very habitat restricted.

Habitat: Woodlands and glades over marble, limestone and calcareous shale.

Distr. PD, RV (Allegany, Baltimore, Montgomery, Washington).

Flw/Fr: Aug-Sept (Oct).

#### **Bromus ciliatus Linnaeus**

Fringed Brome

G5

SH

Poaceae (Grass Family)

**Taxnote**: Maryland plants are var. *ciliatus*. Previous records showing a much larger distribution have been identified as forms of *B. pubescens* having nearly glabrous lemmas with some basal cilia.

**Cons/Econote**: Historically known from a single site in Maryland, now considered extirpated.

**Habitat**: Calcareous fen (apparently).

**Distr**. AP\* (Garrett\*). **Flw/Fr**: late Jul-Aug.

Bromus kalmii A. Gray

Wild Chess

G5

SH X

Poaceae (Grass Family)

**Taxnote**: B. purgans Linnaeus, a name often used for B. pubescens Muhlenberg ex Willdenow is often misapplied to this species.

**Cons/Econote**: Historically known from a single site in Maryland, now considered extirpated.

Habitat: Calcareous fen (apparently).

State State Federal Global Common Name Rank Rank Status Status Scientific Name

**Distr**. AP\* (Garrett\*). Flw/Fr: late Jul-Aug.

Bromus latiglumis (Shear) A.S. Hitchcock

Broad-glumed Brome **S**1 G5

Poaceae (Grass Family)

Syn: Bromus altissimus Pursh

**Cons/Econote**: Endangered by displacement by invasive species, particularly Japanese knotweed (*Reynoutria japonica*).

**Habitat**: Floodplain forests and river bluffs, often over calcareous (limestone, shale, shell-marl?) substrates.

Distr. AP, CP\*, PD, RV (Allegany, Baltimore, Cecil, Howard, Montgomery\*, Washington, Wicomico\*).

Flw/Fr: late Aug-mid Sept.

Bromus nottowayanus Fernald

**Nottoway Brome** 

**G3G5** 

**S3S4** 

Ε

Poaceae (Grass Family)

Cons/Econote: Surveys in Maryland have documented a patchy but broad distribution. Infrequent to frequent along medium to large river systems, particularly along the Potomac River and its tributaries.

**Habitat**: Floodplain forests and river bluffs.

Distr. AP, CP, PD, RV (Allegany, Baltimore, Garrett, Harford?, Kent, Montgomery\*, Prince George's, Washington).

Flw/Fr: late Jun-Aug.

Buchnera americana Linnaeus

Bluehearts

G5?

SH

X

Scrophulariaceae (Figwort Family)

Cons/Econote: Once apparently fairly widespread in Maryland as demonstrated by collections from 1892-1938. Fire suppression likely plays a role in this species' rarity.

**Habitat**: Barrens and glades including Piedmont serpentine barrens and coastal sand barrens.

**Distr**. CP\*, PD\* (Cecil\*, Harford\*, Montgomery\*, Prince George's\*, Worcester\*).

Cacalia muehlenbergii (Schultz-Bipontius) Fernald

see Arnoglossum reniforme (Hooker) H.E. Robinson

Calamagrostis porteri A. Gray

Porter's Reedgrass

G4T4

**S**3

Poaceae (Grass Family)

**Taxnote**: Maryland plants are the widespread Appalachian ssp. *porteri*.

Cons/Econote: This species forms large patches of vegetative stems (clones?) and is locally abundant in Green Ridge State Forest but apparently rarely flowers. The lack of sexual reproduction and an unknown ramet/genet ratio recommends continued inclusion as a conservation element. Rare sexual reproduction is a recurring theme in the shale barren region occurring in several phylogenetically unrelated taxa (e.g., Smilax ecirrata, Spiraea corymbosa, Veratrum hybridum).

State State Federal Global Common Name Rank Rank Status Status Scientific Name

**Habitat**: Dry to mesic woodlands and oak-hickory forests, typically but not always over shale substrates, in a variety of topographic positions.

Distr. AP, RV (Allegany).

Flw/Fr: (rarely) Aug.

#### Calla palustris Linnaeus

Wild Calla

G5

**S**1 Ε

Araceae (Arum Family)

Cons/Econote: A circumboreal species barely entering Maryland at its southern range limit and restricted to a few montane peatlands (for historical note see Bell 1941).

**Habitat**: Mountain peatland swamps.

Distr. AP (Allegany, Garrett).

Flw: mid May-early Jun; Fr: late Jun

## Callicarpa americana Linnaeus

French Mulberry

G5

SH X

Lamiaceae (Mint Family)

Cons/Econote: A native population once occurred in Wicomico County "near Salisbury" as documented by a collection made by William Canby and W. Coulter Rose in 1894. Stations for this species are scattered across the state but all are thought to be escapes from cultivation as the plant is widely available in the nursery trade.

**Habitat**: Rich woods. **Distr**. CP (Wicomico\*).

# Calopogon tuberosus (Linnaeus) Britton, Sterns, & Poggenburg Tuberous Grass-pink

G5

S1

Ε

Orchidaceae (Orchid Family)

**Taxnote**: Maryland plants are the widespread var. *tuberosus*.

Cons/Econote: Endangered by habitat loss and woody succession of bog-like habitats. Shreve (1910, p. 234) describes a location in the Catoctin Mountains of Frederick County (as Limodorum tuberosum) among "decayed sandstone in pockets of Sphagnum moss".

**Habitat**: Acidic seeps and peaty meadows.

**Distr**. CP, RV\* (Baltimore (city)\*, Charles, Frederick\*, Prince George's, Queen Anne's\*, Wicomico, Worcester).

Flw: early-mid Jun; Fr: Jul.

### Calystegia spithamaea (Linnaeus) Pursh ssp. spithamaea

Low Bindweed

G5T4T5

**S**2

Convolvulaceae (Morning Glory Family)

**Taxnote**: The taxonomy of the genus is unclear with some authors subsuming *Calystegia* under *Convolvulus* and additionally applying several names to the taxon restricted to central Appalachian Shale Barrens. The shale barren bindweed, represented by C. spithamaea ssp. stans (Michaux) Brummitt, also occurs in Maryland and is frequent in the shale barren region on the barrens and along roadcuts. Several Maryland records have not been determined as to subspecies.

Cons/Econote: Restricted to a few, very rare habitats.

**Habitat**: Limestone, and other mafic glades and woodlands.

**Distr**. AP\*, CP\*?, PD, RV (Anne Arundel\*?, Allegany, Baltimore\*, Frederick, Garrett\*, Montgomery, Prince George's\*?, Washington).

Flw: Jun-Jul; Fr: Aug.

Campanula divaricata Michaux

Southern Harebell

G4

SH X

Campanulaceae (Bluebell Family)

Cons/Econote: Last seen along roadside outcrops in 1983.

**Habitat**: Sandstone and shale ledges. **Distr**. AP\*, RV\* (Allegany\*, Garrett\*).

Flw: Aug; Fr: Oct.

Campanula rotundifolia Linnaeus

American Harebell

G5

S2

Campanulaceae (Bluebell Family)

**Cons/Econote**: In Maryland, as in much of its range in the eastern U.S. this species is a habitat specialist and generally occurs in low numbers.

**Habitat**: Outcrops of limestone, calcareous shale and serpentine.

Distr. PD, RV (Allegany, Cecil, Harford).

Flw: late Jun-mid Jul; Fr: Sept.

Capnoides sempervirens (Linnaeus) Borkhausen

Pale Corydalis

G5

**S**3

Fumariaceae (Fumitory Family)

Syn: Corydalis sempervirens (Linnaeus) Persoon

**Cons/Econote**: Infrequent but may be locally abundant over outcroppings and exposures of acidic sandstones, particularly where sunlight is not limiting.

Habitat: Sandstone glades and woodlands (Oriskany sandstone) and other outcrops of felsic rocks.

**Distr**. AP, RV (Allegany, Frederick, Garrett).

Flw: late May-Jun: Fr: Jul-Aug.

Cardamine douglassii Britton

Purple Cress

G5

**S**3

Brassicaceae (Mustard Family)

Habitat: Nutrient rich alluvial silts and loams in floodplain or mesic hardwood forests.

Distr. CP, PD, RV (Anne Arundel\*, Baltimore\*, Cecil, Frederick, Harford, Montgomery, Prince George's).

Flw: Apr; Fr: May-Jun.

		Global	State	State Federal
Scientific Name	Common Name	Rank	Rank	Status Status
Cardamine longii Fernald	Long's Bittercress	G3?	S2	Е

Brassicaceae (Mustard Family)

**Cons/Econote**: Known from multiple stations scattered along the Chesapeake Bay tributaries, occurring irregularly and considered globally rare (?). Endangered by siltation, eutrophication and potentially by sea level rise increasing the salinity of occupied habitats.

**Habitat**: Fresh tidal marshes and intertidal shores.

**Distr**. CP (Cecil\*, Charles, Dorchester, Somerset, Wicomico, Worcester).

Flw: Jun-Aug; Fr: Jun-Oct.

#### Cardamine rotundifolia Michaux

American Bittercress G4

S3

Brassicaceae (Mustard Family)

**Habitat**: Cold-water spring seeps and clear mountain streams.

Distr. AP (Garrett).

Flw: Apr-May; Fr: Apr-Jun.

# Carex aestivalis M. A. Curtis ex Gray

Summer Sedge

G4

S1 E

Cyperaceae (Sedge Family)

**Cons/Econote**: A single known location.

Habitat: Rich, mesic woodland at high elevation.

**Distr**. AP (Garrett). **Flw/Fr**: mid Aug.

#### Carex albursina Sheldon

White Bear Sedge

G5

**S**3

Cyperaceae (Sedge Family)

Cons/Econote: Rare on the Coastal Plain and Piedmont but may be locally abundant in the Ridge and Valley.

**Habitat**: Occurs in a variety of forested habitats and in a variety of topographic positions but generally associated with basic (calcareous) substrates.

Distr. AP, CP, PD, RV (Allegany, Cecil, Charles, Frederick, Garrett, Harford, Montgomery, Prince George's, Washington).

Flw/Fr: May-Jun (Jul).

# Carex appalachica Webber and Ball

Appalachian Sedge

G4

**S**1?

Cyperaceae (Sedge Family)

Syn: C. radiata (Wahlenberg) Dewey, misapplied.

**Taxnote**: This sedge has a long history of taxonomic confusion with *C. radiata*, see Webber & Ball (1979, 1984).

Habitat: Dry to mesic woodlands and forest clearings.

Distr. AP, PD\*, RV (Allegany, Garrett, Montgomery\*, Washington; perhaps overlooked).

Flw/Fr: mid Jun-Jul.

		Global	State State Federal
Scientific Name	Common Name	Rank	Rank Status Status
Carex aquatilis Wahlenberg	Water Sedge	G5	S1

Cyperaceae (Sedge Family)

Taxnote: Maryland plants are var. substricta Kükenthal

Cons/Econote: A single known station (see Terrell et al. 2000), notably out of range and perhaps introduced at that location.

**Habitat**: Marsh/sedge meadow. **Distr**. CP (Prince George's).

# Carex argyrantha Tuckerman

Hay Sedge

G5

**S**3

Cyperaceae (Sedge Family)

Syn: C. foenea Willdenow, misapplied.

**Cons/Econote**: Most Maryland collections east of Garrett County are historical.

**Habitat**: Sandy or rocky forests and clearings, generally at high elevations.

**Distr**. AP, PD\*, RV\* (Allegany\*, Baltimore\*, Frederick\*, Garrett, Harford\*).

Flw/Fr: Jun-Jul (Aug).

# Carex barrattii Schweinitz & Torrey

Barratt's Sedge

G4

S3

Cyperaceae (Sedge Family)

**Cons/Econote**: This species is an infrequent component of forested wetlands on the Coastal Plain and may form large non-flowering colonies. Roadside populations comprise the majority of Maryland stations.

**Habitat**: Forested or open-canopied nontidal wetlands.

Distr. CP (Anne Arundel, Caroline, Dorchester, Kent, Queen Anne's, Talbot, Wicomico, Worcester).

Flw/Fr: mid Apr-May (Jun).

# Carex brunnescens (Persoon) Poiret

Brownish Sedge

G5T5

**S**3

Cyperaceae (Sedge Family)

Taxnote: Maryland plants are var. sphaerostachya (Tuckerman) Kükenthal

**Cons/Econote**: Nearly restricted to the Allegheny Plateau but with a single known location (disjunct) in the Piedmont.

Habitat: Rocky, usually montane, forests and forest clearings.

Distr. AP, PD (Harford, Garrett).

Flw/Fr: Jun-early Jul (Aug).

# Carex bullata Schkuhr ex Willdenow

Button Sedge

G5

**S**3

Cyperaceae (Sedge Family)

Habitat: Delmarva Bays, edges of forested swamps and other open-canopy nontidal wetlands.

Distr. CP (Anne Arundel, Baltimore, Caroline, Cecil, Dorchester, Kent, Prince George's, Queen Anne's, St. Mary's, Somerset,

Worcester).

Flw/Fr: mid May-Jul (Sept).

Cyperaceae (Sedge Family)

Carex buxbaumii Wahlenberg

Buxbaum's Sedge G5 S2 T

**Cons/Econote**: Restricted to fens and open-canopied seepage swamps and generally threatened with alterations of groundwater hydrology arising from development around isolated wetland systems.

Habitat: Mountain peatland sedge meadows, acidic fens.

Distr. AP, CP, PD (Carroll, Cecil, Garrett, Harford, Montgomery, Prince George's, St. Mary's).

Flw/Fr: Jun.

Carex careyana Torrey ex Dewey

Carey's Sedge G4G5 S1 E

Cyperaceae (Sedge Family)

Cons/Econote: Generally threatened by displacement by invasive species, loss of mature forested habitat and by small population sizes.

**Habitat**: Rich upland or floodplain woods, often over limestone.

Distr. AP, PD, RV (Garrett, Montgomery, Washington).

Flw/Fr: late Apr-May (Jun).

Carex conoidea Schkuhr ex Willdenow

Field Sedge

G5

S1 E

Cyperaceae (Sedge Family)

**Cons/Econote**: Few, scattered locations vulnerable to loss via woody succession of open-meadow habitat and competition with invasive species.

Habitat: Wet meadows and glades.

Distr. AP, CP, PD (Carroll, Cecil, Frederick, Garrett, Prince George's).

Flw/Fr: Jun.

Carex cristatella Britton

Crested Sedge

G5

**S**1?

Cyperaceae (Sedge Family)

Cyperaceae (Sedge Family)

**Habitat**: Wet meadows, swamps and floodplains of medium to large rivers.

Distr. CP, PD, RV (Allegany, Anne Arundel, Baltimore, Cecil, Harford, Montgomery).

Flw/Fr: Jun-Jul.

Carex davisii Schweinitz & Torrey

Davis' Sedge

G4

S1 E

40

Scientific Name Global State State Federal Rank Rank Status Status

**Cons/Econote**: Generally threatened by displacement by invasive species, particularly by Japanese knotweed (*Reynoutria japonica*) along the Potomac River where most populations are known.

Habitat: Rich floodplain forests in sandy/silty alluvium.

Distr. PD, RV (Frederick, Harford, Montgomery, Washington).

Flw/Fr: mid-late May (Jun).

# Carex decomposita Muhlenberg

Cypress-knee Sedge

G3

S1 E

Cyperaceae (Sedge Family)

**Cons/Econote**: A single known extant location but historically more abundant as evidenced by numerous pre-1900 collections from the Potomac Gorge.

Habitat: Potholes in rocky scour bar.

**Distr**. PD (Montgomery).

# Carex diandra Schrank

Lesser Panicled Sedge

G5

S1 E

Cyperaceae (Sedge Family)

**Cons/Econote**: One of the more striking disjuncts (from the northeastern US) in Maryland.

Habitat: Mountain peatland sedge meadow.

Distr. AP (Garrett).

Flw/Fr: mid May-early Jun.

# Carex digitalis Willdenow var. macropoda Fernald

Southern Slender Woodland Sedge G5TNR

S1?

Cyperaceae (Sedge Family)

**Taxnote**: Infraspecific taxa in *C. digitalis* are not often distinguished but see Fernald (1938) and Ford et al. (2006) for discussion of taxa.

Habitat: Nutrient rich, mesic to dry forests.

Distr. CP, PD (Montgomery, Wicomico, Worcester; distribution likely incomplete).

Flw/Fr: May

#### Carex eburnea F. Boott

Ebony Sedge

G5

S1 E

Cyperaceae (Sedge Family)

Cons/Econote: A single known location in Maryland.

Habitat: Limestone outcrops.

**Distr**. RV (Allegany). **Flw/Fr**: May-early Jun.

# Carex echinata Murray

Prickly Sedge

G5T5

**S**3

Cyperaceae (Sedge Family)

Global State State Federal Scientific Name Common Name Rank Status Status Rank **Syn**: *C. angustior* Mackenzie C. cephalantha (Bailey) Bicknell C. laricina Mackenzie **Taxnote**: Maryland plants are the circumboreal ssp. echinata. Frye and Lea (2006) discuss the taxa and history of (mis) application of names within section Stellulatae. **Habitat**: Mountain peatland sedge meadows, open-canopied acidic seeps. Distr. AP, CP\*, PD (Carroll, Cecil, Garrett, Prince George's\*). Flw/Fr: mid May-Jun. Carex emoryi Dewey Emory's Sedge **S**3 G5 Cyperaceae (Sedge Family) **Habitat**: Rocky banks and bedrock scour wetlands of large rivers; rarely riverine swamps. Distr. AP, PD, RV (Allegany, Baltimore, Frederick, Harford, Montgomery, Washington). Flw/Fr: mid-late May (Jun). Carex exilis Dewey Coast Sedge G5 **S**1 Ε Cyperaceae (Sedge Family) Cons/Econote: This species is associated with globally rare, bog and swamp habitats in Maryland. **Habitat**: Atlantic white cedar (*Chaemacyparis thyoides*) swamps, peaty fens. **Distr**. CP (Anne Arundel). Flw/Fr: mid-late May (Jun). S1Carex fraseriana Ker-Gawler Fraser's Sedge G4 Ε Cyperaceae (Sedge Family) Syn: Cymophyllus fraseri (Andrews) Mackenzie **Cons/Econote**: Endemic to the southern Appalachians and at the species' northern range limit in Maryland. Habitat: Rich, mesic, often old-growth oak forests. **Distr**. AP (Garrett). Flw/Fr: May (Jun).

Carex gigantea Rudge

Giant Sedge

G4

**S**3

Cyperaceae (Sedge Family)

**Habitat**: Seasonally flooded pools, swamp forests and floodplains.

**Distr**. CP (Caroline, Charles, Kent, Queen Anne's, Somerset, Wicomico, Worcester).

Flw/Fr: Jun (Sept).

State State Federal Global Scientific Name Common Name Rank Status Status Rank Southern Waxy Sedge Carex glaucescens Elliott G4 **S**1 E

Cyperaceae (Sedge Family)

Cons/Econote: Maryland stations are the northernmost geographic extent of this southern species.

**Habitat**: Moist areas in pine flatwoods in wet, acid and/or peaty soils.

Distr. CP (Dorchester, Wicomico, Worcester).

Flw/Fr: mid Jul-Aug (Sept).

Carex haydenii Dewey

Cloud Sedge

G5

**S**1 Е

Cyperaceae (Sedge Family)

Syn: C. stricta Lamarck var. decora Bailey

Cons/Econote: Occurs in scattered locations in fens and meadows at high elevations and is restricted to the Allegheny Plateau.

**Habitat**: Minerotrophic fens and forested or open-meadow seeps.

**Distr**. AP (Garrett).

Flw/Fr: Jun.

Carex hirtifolia Mackenzie

Pubescent Sedge

G5

**S**3

Cyperaceae (Sedge Family)

**Habitat**: Nutrient rich dry to mesic forests, often in stream valleys.

Distr. AP, CP, PD, RV (Allegany, Baltimore, Carroll, Cecil, Charles, Garrett, Harford, Howard, Montgomery, Prince George's,

Washington).

Flw/Fr: (late Apr) May-early Jun.

Carex hitchcockiana Dewey

Hitchcock's Sedge

G5

S1

Ε

Cyperaceae (Sedge Family)

**Cons/Econote**: Restricted to mature forests in nutrient rich soils.

**Habitat**: Upland forests over calcareous substrates (limestone, shell-marl), less commonly in rich alluvium.

**Distr**. CP, PD, RV (Cecil, Charles, Harford, Montgomery, Prince George's, Washington).

Flw/Fr: (late Apr)-May- early Jun.

Carex hyalinolepis Steudel

Shoreline Sedge

G4G5

**S2S3** 

Cyperaceae (Sedge Family)

Syn: C. lacustris Willdenow var. laxiflora Dewey

**Habitat**: Fresh to slightly brackish tidal marshes and swamp forests, often in large stands along cypress (*Taxodium distichum*) forestmarsh ecotones.

**Distr.** CP (Anne Arundel, Calvert, Dorchester, Prince George's, Somerset, Worcester).

Flw/Fr: Jun (Sept).

# Scientific Name Common Name Rank Rank State State Federal Rank Rank Status Status Status

Cyperaceae (Sedge Family)

**Taxnote**: C. hystricina, an orthographic variant occurs in some manuals.

Cons/Econote: Occurs in highly invasible habitats, and require periodic management to maintain.

Habitat: Wet meadows over mafic or ultramafic substrates (most commonly associated with serpentine).

Distr. PD (Baltimore, Cecil, Montgomery).

Flw/Fr: late May-Jun (Jul).

# Carex interior Bailey Inland Sedge G5 S1

Cyperaceae (Sedge Family)

**Taxnote**: Historically confused with the common *C. atlantica*; see Frye & Lea (2006) for discussion.

**Cons/Econote**: This species is restricted to wetlands over serpentine but may be locally abundant in those habitats. In the species' southern range it is most commonly, if not obligately, associated with mafic substrates.

Habitat: Seeps and streambanks over serpentine.

**Distr**. PD (Baltimore, Cecil). **Flw/Fr**: mid May-mid Jun.

# Carex joorii Bailey Joor's Sedge G4G5 S3

Cyperaceae (Sedge Family)

Cons/Econote: Although a dominant plant at some sites this species is associated with a narrow range of hydrological conditions.

Habitat: Cypress-swamps, swampy meadows and Delmarva Bays.

Distr. CP (Caroline, Charles, Dorchester, Kent, Somerset, Talbot, Wicomico, Worcester).

Flw/Fr: late Jul-Aug (Sept).

# Carex lacustris Willdenow Lake-bank Sedge G5 S2

Cyperaceae (Sedge Family)

**Cons/Econote**: Distributed as a Mountain-Coastal Plain disjunct in Maryland, occurring in both high-elevation meadows and fresh tidal swamps. Strongly colonial, often forming extensive stands.

**Habitat**: Mountain peatlands shrub swamps and sedge meadows, fresh tidal marshes and fens.

Distr. AP, CP (Calvert, Charles, Cecil, Dorchester, Harford, Kent, Garrett, Prince George's\*, Talbot).

Flw/Fr: Jun- early Jul.

# Carex lasiocarpa Ehrhart Slender Sedge G5 S1 E

Cyperaceae (Sedge Family)

Taxnote: Maryland plants are var. americana Fernald

Cons/Econote: A circumboreal species near its southern range limit in Maryland; a single station.

Habitat: Mountain peatland sedge meadow.

Distr. AP (Garrett).

Flw/Fr: Jun.

Carex laxiculmis Schweinitz var. copulata (Bailey) Fernald Coupled Sedge G5T3T5 S1?

Cyperaceae (Sedge Family)

Syn: C. copulata (Bailey) Mackenzie

**Taxnote**: Treated as a hybrid and as a species (see Fernald 1950). See Manhart (1986) and Naczi et al. (2001) for discussion of nomenclature.

**Cons/Econote**: Tentatively tracked as a rare species; Maryland occurrences represent few collections, but these seem to be distinct from the common var. *laxiculmis*.

Habitat: Nutrient-rich, sandy alluvial forests.

**Distr**. PD (Montgomery). **Flw/Fr**: late Apr-May (Jun).

#### Carex louisianica Bailey

Louisiana Sedge

G5

**S**3

Cyperaceae (Sedge Family)

**Cons/Econote**: Restricted to the Coastal Plain but may be locally abundant at some sites, particularly in southern Maryland on the Western Shore.

**Habitat**: Floodplain forests, canopy gaps in swamp forests.

Distr. CP (Anne Arundel\*, Baltimore\*, Caroline, Charles, Dorchester, Harford, Prince George's, St. Mary's, Wicomico, Worcester).

**Flw/Fr**: late May-Jul (Sept).

## Carex lucorum Willdenow ex Link

Blue Ridge Sedge

G4T4

**S**1

Cyperaceae (Sedge Family)

**Taxnote**: Maryland plants are var. *lucorum*.

**Cons/Econote**: Maryland records represent few, scattered collections; however, the species may be overlooked as the common *C. pensylvanica*.

Habitat: Dry woodland clearings and barrens.

**Distr**. PD, RV\*: (Baltimore, Cecil, Washington\*).

Flw/Fr: May

# Carex lupuliformis Sartwell

False Hop Sedge

G4

**S**2

Cyperaceae (Sedge Family)

Cons/Econote: Populations are scattered over the Coastal Plain and (rarely) the Piedmont in a variety of isolated wetlands.

Habitat: Delmarva Bays, open-canopied swamps, vernal pools.

Distr. CP, PD (Anne Arundel, Caroline, Cecil, Charles, Dorchester, Montgomery, Queen Anne's, Worcester).

Flw/Fr: late Jun-Aug (Sept).

Carex meadii Dewey

Mead's Sedge

G4

**S**1

Ε

Cyperaceae (Sedge Family)

Cons/Econote: Associated with rare woodland and barrens communities in the Piedmont. Threatened by development, woody succession, and competition with exotic species.

**Habitat**: Woodland clearings and barrens over ultramafic (diabase, serpentine) soils.

**Distr**. PD (Baltimore, Carroll\*, Montgomery).

Flw/Fr: Jun.

Carex michauxiana Boeckeler

Andre Michaux's Sedge

G5

SH

Cyperaceae (Sedge Family)

Cons/Econote: Documented from Maryland by a single collection as a striking disjunct from the northeastern U.S. The site of collection has been dramatically altered and the species may now be extirpated from Maryland.

**Habitat**: Acidic, forested seep.

**Distr**. AP\* (Garrett\*). Flw/Fr: late May

Carex mitchelliana M.A. Curtis

Mitchell's Sedge

G4

**S**2

Cyperaceae (Sedge Family)

Svn: C. crinita Lam. var. mitchelliana (M.A. Curtis) Gleason

Cons/Econote: A rarely identified species; however, Maryland collections are few, scattered and represent few individuals.

Habitat: Swamp forests, lake shores, floodplains, fresh tidal forest/marsh ecotones.

**Distr.** CP (Dorchester, Kent, Somerset, Wicomico, Worcester).

Flw/Fr: mid May-Jun.

Carex oxylepis Torrey & Hooker

Sharpscale Sedge

G5?TNR

**S**1

Cyperaceae (Sedge Family)

**Taxnote**: Maryland plants are var. *oxylepis*.

**Cons/Econote**: Tentatively tracked as a rare species. A southern peripheral with a single known station in Maryland.

**Habitat**: Floodplain forest.

**Distr**. CP (St. Mary's).

Flw/Fr: mid May- early Jun.

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Carex pedunculata Muhlenberg ex Willdenow Long-stalked Sedge G5 **S**1 Ε

Cyperaceae (Sedge Family)

Cons/Econote: Occurs in few scattered and disjunct sites in highly invasible communities. One of the few carices that appears adapted for insect (ant) dispersal, the perigynia with a basal eliasome.

**Habitat**: Calcareous mesic forests and outcrops; montane alluvial forest.

Distr. AP, CP, RV (Allegany, Garrett, Prince George's).

Flw/Fr: mid Apr- mid May

# Carex pellita Muhlenberg

Wooly Sedge

G5

S2?

Cyperaceae (Sedge Family)

Syn: C. lanuginosa Michaux, misapplied.

Cons/Econote: Occurs in a variety of wetland communities, nearly statewide, but in a relatively small number of sites.

**Habitat**: Wet meadows, ditches, pastures, forested wetlands over a variety of substrates ranging from acidic to ultramafic.

Distr. AP, CP, PD, RV (Allegany, Anne Arundel, Baltimore, Caroline, Carroll, Cecil, Dorchester, Frederick, Garrett, Harford,

Montgomery, St. Mary's). Flw/Fr: mid May-Jun.

# Carex planispicata Naczi

Flat-spiked Sedge

G4

S1S2

**S1**?

Cyperaceae (Sedge Family)

Syn: C. amphibola Steudel var. amphibola, misapplied **Cons/Econote**: Associated with mature hardwood forests.

**Habitat**: Rich, dry to mesic forests, often over mafic susbstrates. **Distr**. CP, PD (Baltimore, Cecil, Harford, Kent, Montgomery).

Flw/Fr: May- early Jun.

# Carex plantaginea Lamarck

Plantain-leaved Sedge

G5

Cyperaceae (Sedge Family)

Cons/Econote: Apparently restricted to the Allegheny Plateau and tentatively tracked as a rare species. The total number of occurrences has not been determined.

**Habitat**: Northern hardwood forests.

Distr. AP (Garrett). Flw/Fr: May (Jun).

# Carex polymorpha Muhlenberg

Variable Sedge

**G**3

SH

X

Cyperaceae (Sedge Family)

Cons/Econote: Last collected in 1891 near "Leslie".

State State Federal Global Scientific Name Common Name Rank Rank Status Status

**Habitat**: Dry sandy forests, woodlands and barrens.

**Distr**. PD\* (Cecil\*).

Carex projecta Mackenzie

Necklace Sedge

G5

**S**2

Cyperaceae (Sedge Family)

Syn: C. tribuloides Wahl. var. reducta Bailey

**Taxnote**: Historically confused with, and often included in *C. tribuloides*.

**Cons/Econote**: Apparently restricted to the Allegany Plateau. The total number of occurrences has not been determined.

Habitat: Wet meadows and fens at high elevations.

Distr. AP (Garrett). Flw/Fr: mid Jun-Jul.

Carex richardsonii R. Brown

Richardson's Sedge

G4

S1

E

Cyperaceae (Sedge Family)

Cons/Econote: Restricted to open meadows over ultramafic soils, threatened by fire exclusion and woody plant succession.

**Habitat**: Serpentine barrens. Distr. PD (Baltimore, Cecil).

**Flw/Fr**: late Apr-May.

# Carex shortiana Dewey!

Short's Sedge

G5

S3S4 E(PD)

Cyperaceae (Sedge Family)

Cons/Econote: Largely restricted to floodplain forests along the Potomac River drainage but recently (and suspiciously) located along the Susquehanna River. Both rivers are heavily degraded by human activities and dramatically altered by invasives such as Japanese knotweed (Reynoutria japonica) and oriental bittersweet (Celastrus orbiculatus). However, the species has undergone a rapid expansion in geographic range and extent that is similar in some respects to rapid spread of *Diarrhena obovata* along the Potomac (see Lea 2012); the latter is now present as far east as the District of Columbia. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Rich floodplain forests, meadows and woodlands in loamy soils.

**Distr**. AP, CP, PD, RV (Allegany, Cecil, Charles, Frederick, Garrett, Montgomery, Prince George's, Washington).

Flw/Fr: May-early Jun.

Carex silicea Olnev

Seabeach Sedge

G5

S1Ε

Cyperaceae (Sedge Family)

**Cons/Econote**: A single population on the barrier island (Assateague).

Habitat: Maritime woodland.

**Distr**. CP (Worcester). Flw/Fr: early Jun.

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Carex sparganioides Muhlenberg ex Willdenow G5 S1S2 Bur-reed Sedge

Cyperaceae (Sedge Family)

Cons/Econote: The total number of occurrences has not been determined; the current status is based upon its apparent restriction to floodplain forests and low numbers reported at each site.

**Habitat**: Rich forests, floodplains and meadows.

**Distr**. CP, PD, RV (Allegany\*, Baltimore, Calvert\*, Carroll, Cecil, Frederick, Kent, Montgomery, Washington).

Flw/Fr: mid May-Jun (Jul).

#### Carex straminea Willdenow ex Schkuhr

Eastern Straw Sedge

G5

**S1S2** 

Cyperaceae (Sedge Family)

Svn: C. richii Mackenzie

**Taxnote**: A difficult group (section Ovales), see Rothrock et al. (1997) for discussion of nomenclature and morphology of similar species.

**Cons/Econote:** Widespread but occurring in relatively small populations, these often in high-quality habitats and rare plant communities.

**Habitat**: Seasonal pools, swamps, fresh tidal and nontidal marshes.

**Distr**. CP, PD, RV\* (Allegany\*, Anne Arundel, Caroline, Dorchester, Harford, Montgomery, Washington).

Flw/Fr: mid May-mid Jun.

#### Carex striatula Michaux

Lined Sedge

G5

S3

Cyperaceae (Sedge Family)

**Taxnote**: Similar to and possibly not distinct from C. laxiflora (see Manhart 1986). However, Maryland occurrences appear to be both morphologically and ecologically distinct.

**Cons/Econote**: There are many Maryland occurrences but typically in low numbers per site.

**Habitat**: Associated with dry hardwood forests, particularly over acidic sand and gravel deposits.

Distr. CP, PD, RV (Allegany, Anne Arundel, Baltimore, Caroline, Cecil, Dorchester, Harford, Howard, Montgomery, St. Mary's, Talbot, Washington, Wicomico, Worcester; distribution likely incomplete).

Flw/Fr: late Apr-May (Jun).

# Carex tenera Dewey

Slender Sedge

G5

SH

X

Cyperaceae (Sedge Family)

**Taxnote**: Frequently misidentified and confused with *C. tribuloides*.

Cons/Econote: Maryland records based on few, scattered collections. The species may be overlooked, alternatively the species may be very habitat restricted.

**Habitat**: Floodplain forests.

**Distr**. CP\*, PD\*: (Baltimore\*, Cecil\*, Prince George's\*).

Flw/Fr: late May.

State State Federal Global Common Name Rank Status Status Scientific Name Rank Carex tetanica Schkuhr Rigid Sedge G4G5T1T2Q S1 E

Cyperaceae (Sedge Family)

Taxnote: Maryland plants are var. canbyi Porter.

Cons/Econote: Restricted to a single site in Maryland and known to be extant at fewer than ten sites globally. Native to only a small region comprising northern Delaware, northeastern Maryland, and southeastern Pennsylvania (R. Naczi in Knapp et al. 2011).

Habitat: Calcareous meadow.

Distr. PD (Cecil). Flw/Fr: late May-Jun.

Carex trichocarpa Muhlenberg ex Willdenow

Hairy-fruited Sedge

G4

**S**2

Cyperaceae (Sedge Family)

Cons/Econote: Occurs at few sites, threatened by development and hydrological alterations.

**Habitat**: Wet meadows and open stream banks.

**Distr**. PD (Baltimore, Carroll, Howard\*).

Flw/Fr: mid May-mid Jun.

Carex tuckermanii F. Boott ex Dewey

Tuckerman's Sedge

G4

S1

Ε

Cyperaceae (Sedge Family)

**Cons/Econote**: Restricted to a few sites on the Allegheny Plateau.

**Habitat**: Floodplain pools.

Distr. AP (Garrett). Flw/Fr: mid Jun-Jul.

Carex venusta Dewey

Dark Green Sedge

G4T4

**S3S4** 

Cyperaceae (Sedge Family)

**Taxnote**: all Maryland plants are var. *minor* Boeckeler.

Cons/Econote: Associated with open wetlands in acidic soils; populations respond to moderate disturbances that retard succession but these disturbances may also promote competition with exotic species.

**Habitat**: Powerline swales, forest clearings and other open-canopied meadows in seasonally saturated sandy or peaty soils.

Distr. CP, PD\* (Calvert, Caroline, Charles, Montgomery\*, Prince George's, St. Mary's, Talbot, Wicomico, Worcester; distribution incomplete, the species has been recently reported from additional counties on the Eastern Shore).

Flw/Fr: late May-Jun (Jul).

Carex vesicaria Linnaeus

Inflated Sedge

G5

S1

Т

Cyperaceae (Sedge Family)

**Taxnote**: Maryland plants are var. *monile* (Tuckerman) Fernald

Global State State Federal Common Name Rank Status Status Scientific Name Rank

Cons/Econote: Circumboreal. Previously considered to occur at a single station in Garrett County (Frye & Lea 2001), the occurrence of plants on the Delmarva Peninsula represents a southern range extension. Alternatively, these plants may represent a cryptic taxon, and that bears investigation.

**Habitat**: Montane vernal pools, Delmarva Bays.

**Distr**. AP, CP (Caroline, Garrett).

Flw/Fr: mid Jun-Jul (Aug).

#### Carex vestita Willdenow

Velvety Sedge

G5

**S**2 T

Cyperaceae (Sedge Family)

Cons/Econote: Maryland plants are represented by numerous small populations nearly all of which are on roadsides and few of which are adequately protected.

**Habitat**: Open, sandy or gravelly, seasonally saturated wetlands. The species thrives on disturbance, appearing in frequently mowed roadsides, powerlines and even occasionally along recently graded sandy roadsides.

Distr. CP (Anne Arundel, Baltimore, Caroline, Cecil, Dorchester, Kent, Prince George's\*, Talbot, Wicomico).

Flw/Fr: (late Apr) May-Jun (Jul).

#### Carya laciniosa (Michaux f.) G. Don

Big Shellbark Hickory

G5

S1

Ε

Juglandaceae (Walnut Family)

Cons/Econote: Maryland "populations" are often single trees; this species is exceedingly rare in the southeastern U.S.

**Habitat**: Rich floodplain forests.

Distr. PD, RV (Howard\*, Montgomery, Washington).

Cassia marilandica Linnaeus

see Senna marilandica (Linnaeus) Link

#### Castanea dentata (Marshall) Borkhausen

American Chestnut

G4

**S2S3** 

Fagaceae (Beech Family)

Cons/Econote: Occurring throughout Maryland as stump sprouts and occasionally reaching reproductive maturity only to be reduced to stump sprouts in following years. There have been several attempts at tracking individuals that produced fruit; the distribution below is based upon that data, which has not been maintained with sufficient regularity.

Habitat: Dry upland woods.

Distr. AP, CP, PD, RV (Allegany, Anne Arundel, Baltimore, Caroline, Charles, Garrett, Harford, Howard, Montgomery, Queen Anne's, St. Mary's, Wicomico; distribution incomplete).

# Castilleja coccinea (Linnaeus) Sprengel

Scarlet Indian-paintbrush

G5

Ε

S1

Orobanchaceae (Broomrape Family)

Scientific Name Global State State Federal
Common Name Rank Rank Status Status

**Cons/Econote**: Endangered due to habitat loss. Reduced to small, isolated fragments of habitat. Of historical interest is that Shreve et al. (1910) state that this species was 'frequent' (p. 481) and occurred among the flora of cut-over forests in the vicinity of Oakland (p. 285). The Carroll County station has not been observed in many years and may be extirpated.

Habitat: Calcareous fens, meadows, and occasionally roadsides.

**Distr**. AP, PD, RV\* (Carroll, Cecil\*, Frederick\*, Garrett).

Flw: late May-Jun; Fr: Aug-Oct.

#### Centella erecta (Linnaeus f.) Fernald

**Erect Coinleaf** 

G5

**S**3

Apiaceae (Carrot Family)

**Habitat**: Restricted to the Atlantic drainage in fresh to brackish marshes, ditches, and roadsides; widespread on the barrier island (Assateague).

**Distr**. CP (Worcester).

# Centrosema virginianum (Linnaeus) Bentham

Coastal Butterfly Pea

G5

**S**2

S1

Fabaceae (Legume Family)

**Cons/Econote**: Although there are many populations there are few well protected 'core' sites for this species. Some reported stations may reflect confusion with *Clitoria mariana*.

**Habitat**: Dry sandy forests and woodlands, often in edge habitats.

Distr. CP (Anne Arundel, Calvert, Caroline, Charles\*, Dorchester, Prince George's, St. Mary's, Wicomico, Worcester).

Flw: mid-Jul-mid Sept; Fr: Aug-Sept.

# Cerastium velutinum Rafinesque

Octoraro Creek Chickweed G5T1

var. villosissimum (Pennell) J.K. Morton

Caryophyllaceae (Pink Family)

Syn: C. arvense var. villosissimum Pennell

C.arvense Linnaeus ssp. velutinum (Rafinesque) Ugborogho var. villosum (Muhlenberg ex Darlington) Hollick & Britton

**Taxnote**: Separable from typical *C. velutinum* by densely white-villous leaves (see key in Weakley 2015). Assessment of this qualitative character by field botanists and the subjectivity it entails is one reason that this species has been reported from several Maryland serpentine barrens but is confirmed only from a single site.

**Cons/Econote**: A narrow endemic of serpentine outcrops in MD and PA. Gustafson et al. (2003) concluded, on the basis of genetic and morphological/life-history components, that this variety is globally endangered. The Service is considering this taxon a candidate for legal status in Maryland, pending investigation of outstanding taxonomic questions.

Habitat: Serpentine barren.

Distr. PD (Baltimore?, Cecil).

State State Federal Global Scientific Name Common Name Rank Rank Status Status Ceratophyllum echinatum A. Gray in Torrey & A. Gray! G4 **Prickly Hornwort** S2? E(PD) Ceratophyllaceae (Hornwort Family) Cons/Econote: Thought to be declining over much of its range (NatureServe 2015) this species was known to occur in a few isolated wetlands in Maryland. However, recent field work has demonstrated that its in-State range has rapidly expanded. The Service has forwarded a proposal to modify this species' State Status. Habitat: Floodplain pools, baymouth barrier wetlands (Sipple 1982), millponds and lakes. **Distr**. AP, CP, PD\* (Caroline, Dorchester, Garrett, Harford\*, Kent, Montgomery\*, Queen Anne's, Wicomico). Chamaecrista fasciculata (Michaux) Greene Partridge Pea, Sleepingplant G5T3 **S**1 Ε var. macrosperma (Fernald) C. F. Reed Fabaceae (Legume Family) Cons/Econote: Endemic to eastern Virginia and Maryland. **Habitat**: Fresh tidal marshes. **Distr**. CP (Dorchester). Flw: Aug; Fr: Aug-Oct. Chamaecyparis thyoides (Linnaeus) Britton, Sterns & Poggenburg Atlantic White Cedar **S**3 G4 Cupressaceae (Cypress Family) Cons/Econote: Highly sought by the timber industry for its rot-resistant wood in the late 1800s and early 1900s (Beaven & Oosting 1939). Now limited to remnant stands along tidal creeks and nearly extirpated from non-riverine (upland) swamps. **Habitat**: Found in irregularly tidal ecotones along upland habitats, poorly drained habitats in seasonally flooded floodplains, and in coastal plain flatwoods and depression swamps. Associated with slow-moving Blackwater Streams such as those found in the Pocomoke and Nanticoke River watersheds. Distr: CP (Anne Arundel, Dorchester, Somerset?, Wicomico, Worcester). **S**1 Chamaedaphne calvculata (Linnaeus) Moench Leatherleaf G5 T Ericaceae (Heath Family) **Cons/Econote**: Restricted to a narrow zone of Fall Line fens and bogs. Threatened by sedimentation, eutrophication, and urban sprawl. **Habitat**: Acidic seepage fens, "bogs". **Distr**. CP (Anne Arundel). Flw: May-early Jun; Fr: Jul.

Devil's-bit

G5

S2

Chamaelirium luteum (Linnaeus) A. Gray

Heloniadaceae (Swamp-pink Family)

53

Scientific Name Global State State Federal
Common Name Rank Rank Status Status

**Cons/Econote**: Upgraded from the Watchlist in 2012 due to declines in both the number of populations and population sizes. Many of our records are now approaching historical dates (>30 years). Intense herbivory by white-tailed deer is suspected as one factor reducing the State's populations. The Service requests additional information to evaluate this species' conservation status.

**Habitat**: Rich, dry to dry-mesic forests.

Distr. AP, PD, RV\* (Allegany\*, Baltimore, Cecil, Garrett, Harford, Montgomery).

Flw: late May-Jun; Fr: Jul.

# Chelone obliqua Linnaeus

Red Turtlehead

G5

S2 T

Scrophulariaceae (Figwort Family)

Cons/Econote: Threatened by habitat loss and alteration due to herbicide use, poor habitat protection and low population size.

Habitat: Floodplain forests, ecotones of fresh tidal marshes.

**Distr**. CP, RV?\* (Anne Arundel, Calvert, Frederick?\*, Prince George's, St. Mary's).

Flw: mid Aug-mid Sept; Fr: Sept-Oct.

# Chenopodiastrum simplex (Torrey) S. Fuentes, Uotila, & Borsch!

Giant-seed Goosefoot G5 S2 E(PT)

Chenopodiaceae (Goosefoot Family)

Syn: C. gigantospermum (Aellen) Fernald

C. hybridum Linnaeus var. gigantospermum (Aellen) Rouleau

Chenopodium simplex (Torrey) Rafinesque

**Cons/Econote**: A common species of Midwestern prairies, the Maryland occurrences of *C. simplex* are part of the species' fragmented eastern range. At risk due to habitat loss, and fire suppression may play a role in this species' rarity. The addition of a core population on State wildlands in Garrett County substantially decreases the risk to this species. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Ridgetop forests, glades and outcrops over mafic to slightly acidic substrates.

Distr. AP, RV (Allegany, Garrett).

Flw: mid Aug; Fr: Sept.

#### Chenopodium standleyanum Aellen!

Standley's Goosefoot

G5

S2S3 E(PD)

Chenopodiaceae (Goosefoot Family)

**Cons/Econote**: Occurring as scattered populations in a wide variety of open, sometimes frequently disturbed habitats. However, the species is long persistent in the seed bank responding to a variety of canopy-opening events (e.g., ice damage, gypsy moth defoliation, logging). Populations on shale glades are more dependably present from year to year. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Dry ridgetop forests; coastal shell deposits; shale glades, often growing in shade of red cedar (*Juniperus virginiana*).

Distr. AP, CP, PD\*, RV (Allegany, Baltimore\*, Calvert, Cecil\*, Frederick, Garrett, Howard\*, Kent?, Washington).

Flw: Aug; Fr: late Aug-Sept.

Chimaphila umbellata (Linnaeus) W. Barton

Common Wintergreen

G5T5

**S**3

Ericaceae (Heath Family)

**Taxnote**: Maryland plants are the widespread, northeastern ssp. *cisatlantica* Blake.

Cons/Econote: Although widespread, populations are often small and localized.

Habitat: Inland sand dune and ridge forests and woodlands, sandstone glades, dry ridgetop forests.

Distr. CP, PD, RV (Allegany, Baltimore, Calvert, Caroline, Charles, Dorchester, Frederick, Montgomery\*, Prince George's, St. Mary's,

Washington, Wicomico, Worcester).

Flw: Jun; Fr: Aug-Oct.

Chrysogonum virginianum Linnaeus

Green-and-gold

G5T5?

**S**3

Asteraceae (Aster Family)

**Taxnote**: Maryland plants are the widespread var. *virginianum*.

**Habitat**: Open to lightly shaded forests, forest edges and roadsides; often over limestone but not strictly associated with mafic substrates.

Distr. AP, CP\*, PD, RV (Allegany, Baltimore\*, Garrett, Montgomery, Prince George's\*, Washington).

Flw: May; Fr: Jun-Jul.

Cicuta bulbifera Linnaeus

Bulb-bearing Water-hemlock G5

S1 E

Apiaceae (Carrot Family)

**Cons/Econote**: Associated with a globally rare shrub-swamp community and occurring in small, very isolated populations.

**Habitat**: Baymouth barrier wetland shrub swamps (Sipple 1982).

Distr. CP, PD (Cecil, Kent).

Flw: late Jul-early Aug; Fr: Aug-Sept.

Cinna latifolia Grisebach

Slender Wood Reedgrass

**S**3

Poaceae (Grass Family)

**Cons/Econote**: Narrowly distributed and infrequent in Maryland, restricted to the Allegheny Plateau.

Habitat: Mesic, northern hardwood and forested swamps.

**Distr**. AP (Garrett). **Flw/Fr**: Jul-Aug.

Cirsium horridulum Michaux

Yellow Thistle

G5

G5

**S**3

Asteraceae (Aster Family)

**Habitat**: Meadows, often but not restricted to saline habitats, perhaps spreading along roadways.

Scientific Name  Distr. CP, PD (Baltimore, Carroll, Cecil, Montgomery, Somerse Flw: May; Fr: May-Jun.	Common Name t, Talbot, Worcester).	Global Rank	State Rank	State Status	Federal Status		
Cirsium muticum Michaux Asteraceae (Aster Family) Habitat: Wet meadows, acidic seepage swamps, mountain peatla Distr. AP, PD, RV (Baltimore, Cecil, Frederick, Garrett, Harford Flw: late Aug-Sept; Fr: Sept-Oct.		G5	<b>S</b> 3				
Claytonia caroliniana Michaux Montiaceae (Montia Family) Habitat: Mesic hardwood forests, montane floodplain forests. Distr. AP (Garrett). Flw: Apr; Fr: Apr-May.	Carolina Springbeauty	G5	S3				
Cleistesiopsis divaricata (Linnaeus) Pansarin & F. Barros Spreading Pogonia G4 S1 E Orchidaceae (Orchid Family) Cleistes divaricata (Linnaeus) Ames Cons/Econote: Endangered by habitat loss long-term and woody succession of the habitat in the near-term. There are no protected sites for this species. Habitat: Open-canopied acidic seepage wetland in sandy/peaty soils. Distr. CP (Wicomico). Flw: early-mid Jun; Fr: late Jun-Jul.							
Clematis occidentalis (Hornemann) A.P. de Candolle  Ranunculaceae (Buttercup Family)  Taxnote: Maryland plants are the eastern var. occidentalis.  Cons/Econote: Occurring in a few small populations in specific microhabitats. Endangered by habitat alteration, particularly invasion by non-native vines such as Japanese honeysuckle (Lonicera japonica).  Habitat: Mafic outcrops, rich, mesic hardwood forests.  Distr. AP, PD* (Cecil*, Garrett).  Flw: mid May; Fr: Jun-Jul.							
Clematis ochroleuca Aiton Ranunculaceae (Buttercup Family)	Curly-heads	G4	SH	X			

State State Federal Global Scientific Name Common Name Rank Status Status Rank

Cons/Econote: Attributed to the Maryland flora based upon Colonial-era collections at the British Museum (see Reveal et al. 1987). Otherwise reported from the District of Columbia area by Hermann (1946) based upon specimens annotated and mapped by Erickson (1943).

**Habitat**: Regionally, the species occurs in dry sandy or rocky soils of woodlands and rock outcrops.

**Distr**. PD\* (Montgomery\*).

Clematis viorna Linnaeus

Vase-vine Leatherflower

G5

Ranunculaceae (Buttercup Family)

Habitat: Rich bottomland forests.

**Distr**. CP\*, PD, RV (Allegany, Frederick, Garrett, Montgomery, Washington, Worcester\*).

Flw: mid-late Jun; Fr: Jul-Sept.

Clintonia allegheniensis Harned

Harned's Clintonia

G1Q

**S**1

**S**3

Liliaceae (Lily Family)

**Taxnote**: Distinguished only by the ultramarine fruit color (versus black in *C. umbellulata* (Michaux) Morong). Blain (1997) demonstrated that this taxon was not a hybrid between C. borealis (2n = 2x = 16) and C. umbellulata (2n = 2x = 14) as was often presumed, but found no evidence of genetic divergence between C. umbellulata and C. allegheniensis (also 2n = 2x = 14). However, genetic identities (based upon allozymes) were high among all three species and no evidence has been presented to date that the variation in fruit color is not associated with other adaptive genetic variation.

Cons/Econote: Generally lumped with the common C. umbellulata; the Service prefers to recognize this variant because it is unique to a narrow zone in MD, VA and WV.

Habitat: Rocky, mesic to poorly drained northern hardwoods, often among sandstone (Pottsville Formation) boulders.

**Distr**. AP (Garrett).

Flw: Jun; Fr: late Sept-Oct.

Clintonia borealis (Aiton) Rafinesque

Clinton Lily

G5

S2

T

Liliaceae (Lily Family)

**Cons/Econote**: Occurring as scattered populations, generally in very low numbers. Threatened by habitat loss.

**Habitat**: Forested seeps among northern hardwoods and hemlock and often among sandstone (Pottsville Formation) boulders.

Distr. AP (Garrett). Flw: Jun; Fr: Jul-Aug.

Coeloglossum viride (Linnaeus) Hartman

See Dactylorhiza viridis (Linnaeus) R.M. Bateman, Pridgeon, and M.W. Chase

Coelorachis rugosa (Nuttall) Nash

Wrinkled Jointgrass

G5

S1E

Poaceae (Grass Family)

**Cons/Econote**: Occurring as small populations restricted to natural (Delmarva Bays) and rarely unnatural clearings (e.g., powerlines) in forested swamps. Endangered by habitat loss in the long-term and by woody succession of ponds in the near-term (Fenstermacher et al. 2014).

Habitat: Delmarva Bays, open-canopied acidic seeps.

Distr. CP (Dorchester, Queen Anne's, Wicomico, Worcester).

Flw/Fr: Aug.

#### Commelina erecta Linnaeus

**Erect Dayflower** 

G5

**S**3

Commelinacea (Dayflower Family)

Habitat: Dry, rocky or sandy woodlands and barrens.

Distr. CP, PD, RV (Allegany, Calvert, Caroline, Charles, Dorchester, Frederick, Montgomery, Washington, Worcester).

Flw: late Jun-early Aug; Fr: Aug-Sept.

# Coptis trifolia (Linnaeus) Salisbury

Goldthread

G5T5

S1 E

Ranunculaceae (Buttercup Family)

Syn: Coptis groenlandica (Oeder) Fernald

**Taxnote**: Maryland plants are var. groenlandica (Oeder) Fassett.

**Cons/Econote**: Endangered by habitat loss, now largely restricted to the Appalachian Plateau.

**Habitat**: Mesic northern hardwoods frequently associated with hemlock (*Tsuga canadensis*). Historically known from the "Ammendale Bog" in Prince George's County (now extirpated) and from Druid Hill Park (Baltimore).

Distr. AP, CP\*, PD\*, RV (Baltimore\*, Frederick, Garrett, Prince George's\*).

Flw: mid May; Fr: Jun-Jul.

# Corallorhiza trifida Châtelain

Early Coralroot

G5

S1 E

Orchidaceae (Orchid Family)

Cons/Econote: Occurring in Maryland as two small and perhaps remnant populations at or near the southern range limit.

Habitat: Montane basic seepage swamps, black ash-hemlock and red spruce-hemlock swamps.

Distr. AP (Garrett).

# Corallorhiza wisteriana Conrad

**Spring Coralroot** 

G5

S1 E

Orchidaceae (Orchid Family)

**Cons/Econote**: Occurring as a few, scattered populations with low numbers; all of them co-occur with a variety of invasive weeds. The ability of orchids to remain dormant for many years is notorious and many of our records have not been seen for years. According to Wiegand (2005) this species is likely extirpated from the Catoctin Mountains.

**Habitat**: Descriptions tend to the general, e.g., "rich woods" corresponding on occasion to basic mesics forests over limestone or coastal shell-marl deposits.

**Distr**. CP, PD\*, RV (Anne Arundel, Frederick\*, Montgomery\*, Prince George's, Washington).

Flw: late Apr-early May: Fr: Jun.

Coreopsis rosea Nuttall

Rose Coreopsis

G3

**S**1

Ε

Asteraceae (Aster Family)

**Cons/Econote**: Endangered by extensive habitat loss, chiefly wetland drainage and conversion to agricultural uses over the last century.

Habitat: Delmarva Bays.

**Distr**. CP (Caroline, Dorchester\*, Queen Anne's).

Flw: Aug; Fr: Aug-Sept.

Coreopsis tripteris Linnaeus

Tall Tickseed

G5

**S**1 Ε

Asteraceae (Aster Family)

Cons/Econote: Restricted to the Potomac Gorge, but historically known from similar sites along the Susquehanna River. Total annual population size in Maryland ranges from 500-1000 plants.

**Habitat**: Bedrock scour bars and riverside prairies, in rich alluvium.

**Distr**. PD (Cecil\*, Harford\*, Montgomery).

Flw: late Aug-Sept; Fr: Sept-Oct.

Coreopsis verticillata Linnaeus

Whorled Coreopsis

G5

**S**3

Asteraceae (Aster Family)

**Habitat**: Dry meadows, roadsides, dry oak-hickory forests, serpentine barrens and woodlands.

**Distr.** CP, PD, RV\* (Anne Arundel, Charles, Howard, Montgomery, Prince George's, Washington\*).

Flw: late Jun-Aug; Fr: Jul-Sept.

Cornus canadensis Linnaeus

Dwarf Dogwood, Bunchberry

G5

S1

E

Cornaceae (Dogwood Family)

Cons/Econote: This common boreal species nears its southern range limit in Maryland and is known to be extant at a single unprotected station.

**Habitat**: Edge of shrub swamp.

Distr. AP (Garrett).

Cornus rugosa Lamarck

Roundleaf Dogwood

G5

S1Ε

Cornaceae (Dogwood Family)

Syn: Swida rugosa (Lamarck) Rydberg

Cons/Econote: Occurring in Maryland near the southern range limit. Maryland populations are not so much populations, but rather isolated occurrences of a few stems.

State State Federal Global Scientific Name Common Name Rank Status Status Rank

**Habitat**: Limestone woodlands, often on steep and rocky slopes.

**Distr**. AP, RV (Allegany, Frederick\*, Garrett, Washington).

Corydalis sempervirens (Linnaeus) Persoon

see Capnoides sempervirens (Linnaeus) Borkhausen

Corylus cornuta Marshall

Beaked Hazelnut

G5

**S**3

Betulaceae (Birch Family)

Cons/Econote: Noted by Shreve et al. (1910, p. 226) as a component of "cut over areas that in certain localities form the roadside shrubbery". Restoration activities to increase this species abundance are underway at Finzel Swamp Preserve.

Habitat: Thickets, forest edges and roadsides.

**Distr**. AP, PD, RV (Frederick, Garrett, Howard, Washington).

Crassula aquatica (Linnaeus) Schönland!

Water Pygmyweed

G5

**S**1

X(PE)

Crassulaceae (Stonecrop Family)

Cons/Econote: Recently rediscovered after a period of 63 years. The Service has forwarded a proposal to list this species as endangered.

**Habitat**: Fresh tidal marshes. **Distr**. CP (Charles, Wicomico\*).

Flw: Apr; Fr: mid-late May

#### Crocanthemum bicknellii (Fernald) Barnhart

Plains Frostweed

G5

**S**1

Е

Cistaceae (Rockrose Family)

Syn: Helianthemum bicknellii Fernald

Cons/Econote: Endangered by habitat loss and fire exclusion. The coastal stations, presumably sandy/gravelly barrens are considered extirpated.

**Habitat**: Serpentine grasslands.

**Distr**. CP\*, PD (Anne Arundel\*, Baltimore, Cecil, Harford, Prince George's\*).

Cuscuta coryli Engelmann!

Hazel Dodder

G5?

**S**1 X(PD)

Convolvulaceae (Morning Glory Family)

**Taxnote**: Spaulding (2013) provides a valuable treatment and discussion of the species.

Cons/Econote: Documented by few, widely scattered collections from 1873-1939 and perhaps only an occassional vagrant species in MD spread by waterfowl (e.g., Costea et al. (2016) confirmed seed dispersal by waterfowl in dodders). Not all records have been verified, several may be the more common C. indecora. A recent collection from Cecil County (J. Hall, JH2014.09.28-08 MARY, TAWES) from unremarkable habitat prompted a review of rank and status. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Brackish marshes. Hosts (from NHP observations) include *Iva*, *Desmodium*, *Baccharis*, and *Solidago*.

**Distr**. AP\*, CP, PD\* (Anne Arundel\*, Cecil, Garrett\*, Queen Anne's\*, Montgomery\*, St. Mary's\*, Talbot\*).

#### State State Federal Global Scientific Name Common Name Rank Status Status Rank Bigseed Dodder Cuscuta indecora Choisv G5T5 S2?

Convolvulaceae (Morning Glory Family)

**Taxnote**: Maryland plants are thus far, var. neuropetala (Engelmann) A. S. Hitchcock. Spaulding (2013) provides a valuable treatment and discussion of the species.

**Cons/Econote**: The distribution and number of *Cuscuta* species is poorly known and the species even more poorly collected. Perhaps overlooked, the species is not identifiable until late summer/early fall. Costea et al. (2016) confirmed seed dispersal by waterfowl in dodders. The historical status of some counties in the distribution is likely an artifact of survey intensity.

Habitat: Brackish marshes, coastal sand spits, growing on a variety of substrates (Iva, Baccharis, Solidago sempervirens), typically along dikes, roadside edges, occasionally beach-front dunes.

**Distr**. CP (Anne Arundel\*, Calvert, Dorchester, Kent, Queen Anne's\*, St. Mary's\*; distribution is provisional).

Flw: Aug-Sept; Fr: Sept-early Nov.

# Cuscuta polygonorum Engelmann

Smartweed Dodder

G5

S1

Е

Convolvulaceae (Morning Glory Family)

Cons/Econote: Known from a single small population and apparently rare regionally. Spaulding (2013) provides a valuable treatment and discussion of the species. Costea et al. (2016) confirmed seed dispersal by waterfowl in dodders. The Anne Arundel station has not been relocated in recent years.

**Habitat**: Riverine marsh, oxbows.

**Distr.** CP, PD\* (Anne Arundel, Harford\*, Montgomery\*, Wicomico?).

# Cuscuta rostrata Shuttleworth

Beaked Dodder

G4

S1

Ε

Convolvulaceae (Morning Glory Family)

Cons/Econote: Endemic to the Southern Appalachians and at its northern range limit in Maryland. Spaulding (2013) provides a valuable treatment and discussion of the species.

**Habitat**: "Mountaintop woods", presumably a red spruce forest (*Picea rubens*) historically.

Distr. AP (Garrett).

# Cyperus dentatus Torrey

Toothed Sedge

G4

SH X

Cyperaceae (Sedge Family)

**Cons/Econote**: Last collected in 1960; the stations are thought to have been extirpated.

Habitat: Sandy shorelines.

**Distr**. CP\* (Cecil\*, Harford\*, Wicomico\*).

# Cyperus diandrus Torrey

Umbrella Flatsedge

**G**5

SU

Cyperaceae (Sedge Family)

**Cons/Econote**: Presumably rare; the Service lacks the information to establish a confident rank.

Habitat: Interdunal swales; ponds.

**Distr**. CP (Prince George's?, Worcester).

Cyperus haspan Linnaeus

Sheathed Flatsedge

G5

S1?

Cyperaceae (Sedge Family)

**Cons/Econote**: A pantropical species variously treated as an invasive weed and as a conservation target in the southeastern U.S. The Service is unsure of this species' conservation rank. See Bryson & Carter (2008) for discussion.

**Habitat**: Fresh tidal marsh.

**Distr**. CP (Worcester).

Cyperus houghtonii Torrey

Houghton's Umbrella-sedge G4?

**S**1

Cyperaceae (Sedge Family)

**Cons/Econote**: Apparently regionally rare (see NatureServe 2015), infrequently reported and often confused with *C. grayii* or *C. lupulinus*; identifications of some Maryland specimens are tentative.

Habitat: Shale barrens, rock outcrops.

**Distr**. RV (Allegany\*, Washington).

Cyperus hystricinus Fernald

Flatsedge

G4

S2

Cyperaceae (Sedge Family)

**Cons/Econote**: Infrequently reported but often confused with *C. retrofractus* and *C. lancastriensis*. Maryland collections require careful study to assess abundance and distribution.

Habitat: Open sandy soils, sandy alluvium.

**Distr**. CP, PD (Caroline, Cecil, Charles, Dorchester, Harford?, Kent, Montgomery, Queen Anne's\*, Wicomico\*, Worcester; distribution likely incomplete).

Cyperus lancastriensis Porter ex A. Gray

Many-flowered Umbrella-sedge G5

SU

Cyperaceae (Sedge Family)

**Cons/Econote**: The conservation rank of this species has not been determined with precision. Recorded from "weedy" plots along the Sassafrass River and from natural barrens. Hybrids with *C. refractus* and *C. strigosus* have been reported.

**Habitat**: Dry to mesic sandy soils, often on eroding bluffs.

Distr. CP, PD\* (Anne Arundel, Calvert, Caroline, Cecil, Charles, Dorchester, Harford, Kent, Montgomery\*, Prince George's).

Cyperus plukenetii Fernald

Plukenet's Flatsedge

G5

SH X

Cyperaceae (Sedge Family)

**Cons/Econote**: Last collected in 1939 near Salisbury, this species becomes increasingly rare north of the Carolinas. Animal dispersal of achenes has been implicated for this species by Carter (1993).

**Habitat**: Sandy woodlands and barrens.

**Distr**. CP\* (Wicomico\*).

Cyperus refractus Engelmann ex Böckler

Reflexed Flatsedge

G5

S2?

Cyperaceae (Sedge Family)

Cons/Econote: Occurring in a variety of open and often disturbed habitats and perhaps overlooked.

**Habitat**: Sandy or rocky open woodlands, roadsides, field edges.

**Distr**. CP, PD, RV (Caroline, Cecil\*, Charles, Dorchester, Frederick, Montgomery, Prince George's, Worcester).

# Cyperus retrofractus (Linnaeus) Torrey

Rough Flatsedge

G5

S2

Cyperaceae (Sedge Family)

Syn: C. dipsaciformis Fernald, in part.

C. retrofractus (Linnaeus) Torrey var. dipsaciformis (Fernald) Kükenthal

Cons/Econote: There is considerable confusion regarding the identity of many records. Those that have been investigated have resulted in determinations of other species including C. hystricinus, C. lancastriensis and C. refractus.

**Habitat**: Open, often xeric sandy soils, sandy alluvium, roadsides.

**Distr.** CP, PD (Dorchester, Kent?, Montgomery, Worcester).

## Cypripedium candidum Muhlenberg ex Willdenow

Small White Lady's-slipper G4

S1Ε

S3

Orchidaceae (Orchid Family)

**Cons/Econote**: Extremely rare in the southeastern U.S. and declining rangewide over the last century (NatureServe 2015).

**Habitat**: River-fronting bluffs and mesic forests over limestone.

**Distr**. RV (Washington).

Flw: mid-late May; Fr: Jul-Sept.

# Cypripedium parviflorum Salisbury var. pubescens (Willdenow) Knight

Large Yellow Lady's-slipper G5T5

Syn: C. pubescens Willdenow

C. calceolus Linnaeus var. pubescens (Willdenow) Correll

Cons/Econote: The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) currently lists all Cypripedium species under CITES Appendix II. This indicates that the species are not necessarily threatened with extinction but they may become threatened unless trade is closely controlled. According to Natureserve (2015) there are very few reports of large, demonstrably secure populations anywhere in North America. There are a few verified instances of poaching from wild populations in Maryland but the Service is unsure of whether these losses are due to horticulture or the medicinal plant trade. Adding to the difficulty of assigning a conservation rank are the extreme fluctuations in demographic estimates at well-known stations over years, e.g., alternately robust and flowering to apparently absent. An additional source of demographic variability may be excessive browse by white-tailed deer. Knapp &

State State Federal Global Scientific Name Common Name Rank Status Status Rank

Wiegand (2014) demonstrated an inverse relationship between deer population size and orchid population size and concluded that this species had been extirpated from most sites in the Catoctin Mountains (Frederick County) where it was once secure (17 sites and ~ 127 individuals in the highest census year). In the distribution below the Service is unsure of the number of extant populations; the putative distribution is largely that of Reed (1964) as emended by recent surveys.

**Habitat**: Rich hardwood forests, often along forest edges and clearings and generally over soils derived from calcareous (shell-marl?, shale, limestone) substrates.

**Distr**. AP, CP\*, PD, RV (Allegany, Baltimore, Cecil, Frederick, Garrett, Harford, Howard, Montgomery, Prince George's\*, Talbot\*).

Flw: mid May; Fr: Jul-Sept.

# Cypripedium reginae Walter

Showy Lady's-slipper

G4

SH

X

Orchidaceae (Orchid Family)

Cons/Econote: Last observed by D.E. Redman (see Redman 2002); the site has not been relocated.

**Habitat**: Sphagnous seep. **Distr**. AP\* (Garrett\*).

#### Cystopteris bulbifera (Linnaeus) Bernhardi

Bulblet Fern

G5

**S**3

Cystopteridaceae (Brittle Fern Family)

**Cons/Econote**: In Maryland an obligate calciphile, locally abundant at some sites.

**Habitat**: Limestone outcrops. Distr. RV (Washington).

# Cystopteris tennesseensis Shaver

Tennessee Bladderfern

G5

**S**1

Cystopteridaceae (Brittle Fern Family)

Cons/Econote: A fertile tetraploid species derived from C. bulbifera and C. protrusa. Located and identified by D. E. Redman (see Redman 1995). Extirpated from a long-known Frederick County station (1938-1991) at the Catoctin Iron Furnace stack.

Habitat: Limy crevices of stone bridge abutments.

**Distr**. PD, RV\* (Frederick\*, Harford).

#### Dactylorhiza viridis (Linnaeus) R.M. Bateman, Pridgeon, and M.W. Chase

Long-bract Green Orchis

G5T5

**S**1 Ε

Orchidaceae (Orchid Family)

Syn: Coeloglossum viride (Linnaeus) Hartman

**Taxnote**: Maryland plants are the Appalachian var. *virescens* (Muhlenberg ex Willdenow) Luer.

Cons/Econote: Undergoing a severe decline, several of our records have not been seen in decades, presumably due to intensive deer browse of small populations. Caging of plants to prevent browse has been employed by the Service to increase reproductive output.

**Habitat**: Rich, deciduous forests, spring-fed headwater seep under hemlock (*Tsuga canadensis*).

Global State State Federal Common Name Rank Rank Status Status Scientific Name

Distr. AP, PD\*, RV (Baltimore\*, Frederick, Garrett).

Flw: late May-Jun; Fr: Aug-Oct.

Delphinium exaltatum Aiton

Tall Larkspur

G3

**S**1

Ε

Ranunculaceae (Buttercup Family)

Cons/Econote: Occurring in Maryland in several small populations, a situation commonly reported throughout the range of this globally rare species. Deer browse has had a devastating effect on Maryland plants, essentially removing plants from the gently sloping open limestone woodlands and restricting them to steep, often vertical outcrops.

**Habitat**: Limestone woodlands.

Distr. RV (Allegany, Washington). Flw: late Jul-early Aug; Fr: Sept-Oct.

# Delphinium tricorne Michaux

Dwarf Larkspur

G5

**S**3

Ranunculaceae (Buttercup Family)

**Habitat**: Rich woods, river bluffs and alluvial terraces, often over limestone.

**Distr.** PD, RV (Allegany, Frederick, Montgomery, Washington).

Flw: late Apr-mid May; Fr: Jun.

## Deschampsia cespitosa (Linnaeus) Palisot de Beauvois

**Tufted Hairgrass** 

G5

S1

Ε

Poaceae (Grass Family)

Syn: D. caespitosa, an orthographic variant.

Cons/Econote: Endangered by habitat loss, fire exclusion, and woody plant succession.

**Habitat**: Thin soils of serpentine barrens.

Distr. PD (Baltimore, Cecil). Flw/Fr: mid May-early Jun.

# Desmodium canadense (Linnaeus) A.P. de Candolle

Showy Tick-trefoil

G5

SH

Fabaceae (Legume Family)

**Habitat**: Wet meadows, river banks, perhaps associated with calcareous soils. Native range may be obscured by planted material at mitigation sites. State rank under review.

**Distr**. CP (Anne Arundel?, Calvert\*, Harford\*, Howard?, Prince George's\*).

# Desmodium cuspidatum (Muhlenberg ex Willdenow) A.P. de Candolle ex Loudon

Toothed Tick-trefoil

G5T5? S1

Fabaceae (Legume Family)

Large-bract Tick-trefoil

Scientific Name Common Name Global State State Federal Rank Rank Status Status

**Taxnote**: Maryland plants are thus far the more midwestern *var. longifolium* (Torrey & A. Gray) Schubert. The large floral bracts subtending each flower are diagnostic but are short-lived (see cover photo).

**Cons/Econote**: Apparently rare (or rarely collected) but cited in several Maryland floristic works as widespread signaling either a severe decline in range or confusion with other species; the Service suspects the latter.

**Habitat**: Shale woodland slopes, calcareous outcrops.

**Distr**. PD\*, RV (Allegany, Montgomery\*).

Flw: late Jun-Jul; Fr: Aug-Oct.

# Desmodium fernaldii Schubert

Fernald's Tick-trefoil

G4

**S**1

Fabaceae (Legume Family)

**Cons/Econote**: Restricted to small populations along sandy roadsides. Maryland plants occupy the extreme northern end of the documented range. Fire suppression may play a role in this species' rarity.

**Habitat**: Open xeric sands, roadsides through sand ridge woodlands.

Distr. CP (Dorchester).

#### Desmodium humifusum (Muhlenberg ex Bigelow) Beck

Trailing Tick-trefoil

G1G20

SH

X

Fabaceae (Legume Family)

Syn: Desmodium x humifusum (Muhlenberg ex Willdenow) L.C. Beck

**Taxnote**: Raveill (2002) documented allozyme evidence of a hybrid origin (*D. paniculatum* x *D. rotundifolium*) for this species; however, the taxon has a unique morphology and occurs rarely, even in the presence of both parents. An independent evolutionary lineage for this species cannot be dismissed; thus the Service prefers to treat it as a species of conservation concern.

**Cons/Econote**: Restricted to a few extant sites in the northeastern U.S., this taxon has undergone a rangewide retraction. W. Canby made a series of collections from the Salisbury, Maryland area between 1865 and 1867.

**Habitat**: Dry sandy soil. **Distr**. CP\* (Wicomico\*).

# Desmodium laevigatum (Nuttall) A.P. de Candolle

Smooth Tick-trefoil

G5

**S**3

Fabaceae (Legume Family)

Cons/Econote: Widespread on the Coastal Plain but generally in low numbers and with few large, protected (core) populations.

Habitat: Sandy roadsides, inland sand dune and ridge woodlands, field edges in dry sandy or rocky soil.

**Distr**. CP, PD\*, RV? (Allegany?, Anne Arundel, Baltimore\*, Calvert, Caroline, Cecil, Dorchester, Howard\*, Kent, Montgomery\*, Prince George's, Somerset, Talbot\*, Wicomico, Worcester).

Flw: mid Aug-early Sept; Fr: Sept-Oct.

#### Desmodium lineatum A.P. de Candolle

Sand Tick-trefoil Lined Tick-trefoil G5

SH X

Fabaceae (Legume Family)

State State Federal Global Scientific Name Common Name Rank Status Status Rank

Cons/Econote: Last collected in 1905. Habitat: Sandy barrens and woodlands.

**Distr**. CP\* (Charles\*, Calvert\*, Worcester\*).

#### Desmodium nuttallii (Schindler) Schubert

Nuttall's Tick-trefoil

G5

**S**1?

Fabaceae (Legume Family)

**Taxnote**: Often included within a broader concept of *D. viridiflorum*, this species appears to be much less frequent. Rarely collected and perhaps only rarely identified.

Habitat: Sandy roadsides, inland sand dunes and ridges, forest edges.

**Distr**. CP, PD\* (Baltimore\*, Caroline, Dorchester, Montgomery?).

Flw: Aug; Fr: Sept-Oct.

# Desmodium obtusum (Muhlenberg ex Willdenow) A.P. de Candolle

Stiff Tick-trefoil

G4G5

S1

E

Fabaceae (Legume Family)

Syn: D. rigidum (Elliott) A.P. de Candolle

**Cons/Econote**: Endangered by habitat loss and small population size; many stations contain only a few stems.

**Habitat**: Dry, open sandy or rocky woodlands, roadsides, field edges.

**Distr**. CP, PD\* (Baltimore, Cecil, Calvert, Dorchester\*, Harford\*, Kent, Montgomery\*, Prince George's\*, Worcester).

#### Desmodium ochroleucum M.A. Curtis ex Canby

Cream Tick-trefoil

G1G2

**S**1

Е

Fabaceae (Legume Family)

Cons/Econote: Endangered by habitat loss over the long term. Collected numerous times historically (1863-1910) and labeled in a rather casual manner, with only vague locality information, suggesting the species was not uncommonly encountered. Tyndall & Groller (2006) discuss the conservation status and restoration of this species at the Maryland site.

Habitat: Sandy barrens and open oak woodlands.

**Distr**. CP (Calvert\*, Caroline\*, Dorchester, Talbot\*, Worcester\*).

Flw: Aug; Fr: Sept.

Desmodium pauciflorum (Nuttall) A.P. de Candolle

see Hylodesmum pauciflorum (Nuttall) H. Ohashi & R.R. Mill

# Desmodium sessilifolium (Torrey) Torrey & A. Gray

Sessile-leaf Tick-trefoil

G5

SH X

Fabaceae (Legume Family)

Cons/Econote: Last collected 1965. **Habitat**: Woodlands and glades. **Distr**. PD\* (Baltimore\*, Cecil\*).

#### State State Federal Global Scientific Name Common Name Rank Status Status Rank Desmodium strictum (Pursh) A.P. de Candolle Pineland Tick-trefoil G4 **S**1 Ε

Fabaceae (Legume Family)

**Cons/Econote**: Endangered by habitat loss; fire suppression may play a role in this species' rarity.

**Habitat**: Sandy roadsides, forest edges of sand ridges, sandy fields.

**Distr**. CP (Anne Arundel\*, Baltimore\*, Dorchester, Wicomico, Worcester).

Flw: late Aug-Sept; Fr: Sept-Nov.

# Dicentra eximia (Ker-Gawler) Torrey

Wild Bleedinghearts

G4

G5

**S**2 T

Fumariaceae (Fumitory Family)

Cons/Econote: An Appalachian endemic and one of our loveliest wildflowers, this species is both geographically restricted and occurs in a specific habitat. Threatened by habitat loss and succession to closed-canopy forest. Fire suppression likely plays a role in this species' rarity.

**Habitat**: Sandstone outcrops, shale cliffs and glades.

**Distr**. AP, CP<sup>I</sup>, PD<sup>I</sup>, RV (Allegany, Garrett, Montgomery<sup>I</sup>, Prince George's<sup>I</sup>; widely planted).

Flw: mid May-early Jun; Fr: Jun-Jul.

#### Dichanthelium aciculare (Desvaux ex Poiret) Gould & Clark Needle Witchgrass

S2?

Poaceae (Grass Family)

Syn: Panicum aciculare Desvaux ex Poiret

Dichanthelium filiramum (Ashe) LeBlond, in part (as to Maryland plants).

Panicum arenicoloides Ashe, in part (as to Maryland plants).

Taxref: LeBlond (2016).

**Taxnote**: The Service is presently reconciling the records for this species following LeBlond (2016). Presently our records include several specimens that are *D. filirameum* (Ashe) LeBlond (= *Panicum chrysopsidifolium* Nash) having the same within-state range as below. Our records also contain specimens matching *Dichanthelium* species 1 in Weakley (2015) (=*Panicum arenicoloides* Ashe), known from dry woodlands in the Ridge and Valley (Allegany County) and Coastal Plain (Worcester County). Additional field and herbarium work is needed.

Cons/Econote: This species has been confirmed from pine-barrens-like habitat on the Eastern Shore. There are several reports of this species from the Western Shore and the Piedmont but these have not been confirmed.

**Habitat**: Dry sandy pinelands, meadows and clearings.

**Distr**. CP (Wicomico, Worcester; distribution provisional).

Flw/Fr: early Jun.

# Dichanthelium annulum (Ashe) LeBlond

Ringed Witchgrass

**GNR** 

SH

Poaceae (Grass Family)

Syn: Panicum annulum Ashe

**Taxnote**: Often subsumed within the *D. dichotomum* group, see LeBlond (2001) for details.

**Cons/Econote**: A component of dry, fire-prone woodlands and barrens over ultramafic soils, this species was collected in the vicinity of Chevy Chase, MD by Agnes Chase in the early 1900s.

Habitat: "Open wooded hillside"

**Distr**. PD\* (Montgomery\*).

## Dichanthelium bicknellii (Nash) LeBlond

Bicknell's Witchgrass

G5

SU

Poaceae (Grass Family)

Syn: Dichanthelium boreale (Nash) Freckmann, misapplied (as to Maryland plants).

Panicum bicknellii Nash **Taxref**: LeBlond (2016).

**Taxnote**: For many years there was a single record for *D. boreale* from Piscataway Park in Prince George's County, MD that was once thought to represent a striking disjunct. However, the latter record and additional recent discoveries by the Service are the newly circumscribed *D. bicknellii* (LeBlond 2016). The conservation rank and distribution of this species have yet to be determined but there is enough information at the present time to confidently state that *D. boreale* is falsely reported from MD.

Habitat: Dry shaly, rocky or sandy woodlands.

**Distr**. CP, PD\*, RV (Allegany, Baltimore\*, Frederick\*, Montgomery\*, Prince George's, Worcester; distribution provisional).

Flw/Fr: late May-early Jun.

# Dichanthelium laxiflorum (Lamarck) Gould

Open-flower Witchgrass

G5

**S**1?

Poaceae (Grass Family)

Syn: Panicum laxiflorum Lamarck

P. xalapense Humboldt, Bonpland, & Kunth

**Cons/Econote**: Maryland stations represent the northern limits of the species' range and the species is here assigned a tentative conservation rank pending additional field work.

Habitat: Riverine scour woodlands, depositional bars and glades.

Distr. CP, PD (Montgomery, Prince George's; distribution provisional).

# Dichanthelium leucothrix (Nash) Freckmann

Roughish Witchgrass

G4?Q

SU

Poaceae (Grass Family)

Syn: D. acuminatum ssp. leucothrix (Nash) Freckmann & Lelong

Panicum leucothrix Nash

**Cons/Econote**: Currently there is not enough information to establish a confident conservation rank. The species may be restricted to coastal peaty fens and seeps but this has not been sufficiently demonstrated. *D. meridionale* (Ashe) Freckmann is similar but occurs in drier soils.

**Habitat**: Dry to moist forests, clearings, outcrops.

**Distr**. CP (Allegany\*, Anne Arundel? Charles, Wicomico; distribution provisional).

Flw/Fr: Aug.

Dichanthelium oligosanthes (Schultes) Gould

Few-flowered Witchgrass

G5T5?

S2S3?

var. oligosanthes

Poaceae (Grass Family)

Syn: Panicum oligosanthes Schultes var. oligosanthes

**Cons/Econote**: This species occurs in large populations at some stations but is otherwise infrequent. Intolerant of shade and heavy leaf litter, populations decline upon canopy closure.

Habitat: Open xeric sands of inland sand dune and ridge woodlands; sandy old fields and clearings.

**Distr**. CP (Caroline, Charles, Dorchester, Prince George's\*, Wicomico, Worcester; expected elsewhere on the Coastal Plain).

Flw/Fr: mid May-early Jun.

Dichanthelium oligosanthes (Schultes) Gould var. scribnerianum (Nash) Gould

Scribner's Witchgrass

G5T5

S2

Poaceae (Grass Family)

Syn: P. oligosanthes Schultes var. scribnerianum (Nash) Fernald

P. scribnerianum Nash

**Cons/Econote**: Occurring with a limited distribution in Maryland, threatened by fire exclusion and woody succession of habitat, particularly Virginia pine (*Pinus virginiana*).

**Habitat**: Serpentine barrens.

Distr. PD (Baltimore, Cecil, Montgomery\*).

Flw/Fr: Jun-Jul.

Dichanthelium ravenelii (Scribner & Merrill) Gould

Ravenel's Witchgrass

G5

G4

SH

Poaceae (Grass Family)

Syn: Panicum ravenelii Scribner & Merrill

**Cons/Econote**: Reports from inland sand dune and ridge forests on the Coastal Plain (Eastern Shore) were based upon misidentified specimens of *D. oligosanthes* var. *oligosanthes*. The distribution below is based upon a few, very old, herbarium specimens (1905-1911).

**Habitat**: Sandy or gravelly barrens and woodlands.

**Distr**. CP\*, PD\* (Montgomery\*, Prince George's\*, St. Mary's\*; distribution provisional).

Dichanthelium scabriusculum (Elliott) Gould & Clark

Tall Swamp Witchgrass Woolly Witchgrass S1 E

Poaceae (Grass Family)

Syn: Panicum scabriusculum Elliott

**Taxnote**: LeBlond determined that plants referable to *Dichanthelium aculeatum* (Hitchcock & Chase) LeBlond in prep. are present (at least historically) in our area (Takoma Park, straddling the District of Columbia and Montgomery County, MD). Reveal & Broome (1981) discussed these Takoma Park specimens concluding that they were conspecific with plants collected by J.B.S. Norton from Snow Hill in Worcester County (*D. scabriusculum* s.s.). LeBlond (pers. comm.) states that *D. aculeatum* may be distinguished from *D. scabriusculum* by a combination of constant characters. Thus, in the distribution below, the Montgomery County record is *D. aculeatum*; *D. scabriusculum* is a species of the coastal plain.

**Cons/Econote**: Endangered by woody succession of open wetland habitat and herbicide use (along powerlines where the species is often found).

**Habitat**: Acidic seeps and open sphagnous meadows; sea level fen.

**Distr**. CP, PD\* (Montgomery\*, Wicomico, Worcester).

# Dichanthelium wrightianum (Scribner) Freckmann

Wright's Witchgrass

G4

S1 E

Poaceae (Grass Family)

Syn: Panicum wrightianum Scribner

Cons/Econote: Endangered by woody succession of open boggy habitats.

Habitat: Acidic seepage fen and saturated swales in peaty soil.

Distr. CP (Wicomico).

Flw/Fr: late Jun.

#### Digitaria villosa (Walter) Persoon!

**Shaggy Crabgrass** 

G5

S1? X(PD)

Poaceae (Grass Family)

Syn: D. filiformis Linnaeus var. villosa (Walter) Fernald

**Taxnote**: Most Maryland plants are *D. filiformis* with smaller spikelets (<2.0 mm) but these plants often have long raceme lengths (>10 cm) and hairy lower sheaths. There may be a geographic, north-south trend in spikelet size and general plant height. The taxonomic usefulness of raceme width to distinguish the species needs to be assessed. The distribution below is that of *D. villosa* in its narrow sense, a plant apparently restricted to the lower Eastern Shore.

**Cons/Econote**: The Service has forwarded a proposal to modify this species' State Status.

Habitat: Sandy fields and roadsides.

**Distr**. CP (Worcester). **Flw/Fr**: mid Sept-early Oct.

# Diphasiastrum tristachyum (Pursh) Holub

Deep-root Clubmoss G5

**S**3

Lycopodiaceae (Clubmoss Family)

Syn: Lycopodium tristachyum Pursh

Habitat: Sandy woods and thickets (Coastal), northern hardwood forests (Mountains).

Distr. AP. CP. PD. RV (Anne Arundel, Caroline, Cecil, Charles, Dorchester, Frederick, Garrett, Harford, Montgomery, Prince George's, Somerset, Wicomico, Worcester).

Diplazium pycnocarpon (Sprengel) M. Broun

see Homalosorus pycnocarpos (Sprengel) Pichi-Sermolli

Dirca palustris Linnaeus

Eastern Leatherwood

G4

T

**S**2

Thymelaceae (Mezereum Family)

**Cons/Econote**: Occurring as scattered colonies in specialized habitats.

**Habitat**: Basic mesic forests associated with soils derived from mafic (limestone, calcareous shale) or ultramafic (amphibolite, diabase) substrates.

**Distr**. AP, PD, RV (Allegany, Baltimore\*, Cecil, Frederick, Garrett, Howard, Montgomery, Washington).

Flw: early-mid April; Fr: May-Jun.

Dodecatheon media Linnaeus

see Primula meadia (Linnaeus) A.R. Mast & Reveal

# Doellingeria infirma (Michaux) E. Greene

Cornel-leaf Aster

G5

**S**3

Asteraceae (Aster Family)

Syn: Aster infirmus Michaux

**Habitat**: Woodlands, glades, fields and upland forest edges, often, but not always over calcium-rich soils.

Distr. AP, CP\*, PD, RV (Allegany, Baltimore, Carroll?, Frederick, Garrett, Harford, Montgomery, Prince George's\*).

Flw: late Jul-early Aug: Fr: Aug-Sept.

# Drosera capillaris Poiret

Pink Sundew

G5

**S**1

Е

Droseraceae (Sundew Family)

Cons/Econote: Endangered by habitat loss; a single station on protected lands. The extant Maryland stations are the northernmost occurrences in the U.S. and are restricted to fragments of pine barrens-like habitat under powerlines.

**Habitat**: Open peaty or sandy soils.

**Distr**. CP (Caroline, St. Mary's\*, Wicomico, Worcester).

# Drosera rotundifolia Linnaeus

Roundleaf Sundew

G5

S3

Droseraceae (Sundew Family)

Cons/Econote: A characteristic species of high elevation wetlands and glades on the Allegheny Plateau (Garrett County) but rare elsewhere.

**Habitat**: Mountain peatlands, acidic seepage wetlands.

State State Federal Global Scientific Name Common Name Rank Rank Status Status

Distr. AP. CP. PD, RV (Anne Arundel, Baltimore, Calvert, Cecil, Charles, Dorchester, Frederick, Garrett, Prince George's, Wicomico,

Worcester).

Flw: Jul: Fr: Sept.

Drymocallis arguta (Pursh) Rydberg

Tall Cinquefoil

G5

SH

Rosaceae (Rose Family)

Svn: Potentilla arguta Pursh

**Taxnote**: Ertter (2007, 2014) outlines the genetic realignments of the tribe Potentilleae and taxonomy respectively.

Cons/Econote: Habitat for this species is now largely extirpated after more than a century of urbanization, last collected in 1957.

**Habitat**: Mafic or ultramafic barrens. **Distr**. PD\* (Baltimore\*, Montgomery\*).

Dryopteris campyloptera Clarkson

Mountain Woodfern

G5

S1

E

Dryopteridaceae (Wood-fern Family)

Cons/Econote: Barely entering Maryland at its highest elevations. Endangered by habitat destruction.

**Habitat**: Mountain summits, high-elevation rock outcrops, red spruce (*Picea rubens*) forests.

Distr. AP (Garrett).

Dryopteris celsa (W. Palmer) Knowlton

Log Fern

**G**4

**S**3

Dryopteridaceae (Wood-fern Family)

**Habitat**: Forested seeps

Distr. AP, CP, PD, RV (Anne Arundel, Baltimore, Caroline, Cecil, Frederick, Harford, Howard, Oueen Anne's, Somerset, Talbot,

Wicomico, Worcester).

Dryopteris clintoniana (D.C. Eaton) Dowell

Clinton's Woodfern

G5

**S**1 Е

Dryopteridaceae (Wood-fern Family)

Cons/Econote: Rare south of the Wisconsinan glacial line, the Eastern Shore populations apparently mark the southern extreme for the species (McAvoy 2007). Each of the four small extant populations occurs in isolated patches of habitat and without any substantial probability of founding new populations. Each population may be greatly threatened by hydrological alterations arising from increased groundwater extraction from irrigation wells and large housing developments.

**Habitat**: Surface water seepages along small streams.

**Distr**. CP (Caroline, Queen Anne's, Somerset).

Dryopteris goldiana (Hooker ex Goldie) A. Grav

Goldie's Fern

G4G5

S2

Dryopteridaceae (Wood-fern Family)

Scientific Name Global State State Federal
Common Name Rank Rank Status Status

**Cons/Econote**: Declining due to increased urbanization of forested fragments in the Piedmont. Fifteen Maryland reports are from a single source (Reed 1953). Many of Reed's records are either unsubstantiated by a voucher or have been reported (D. Redman, pers. comm.) as having been extirpated. No population data has been ascertained for many recent records and/or is not recorded on the labels from specimens located at regional herbaria.

Habitat: Rich, mature, mesic forests (including old-growth fragments), often over mafic substrates.

Distr. AP, PD (Baltimore, Cecil, Garrett, Harford, Montgomery).

#### Echinodorus cordifolius (Linnaeus) Grisebach

Creeping Burhead

G5

S1 E

Alismataceae (Water-plantain Family)

Upright Burhead

**Cons/Econote**: Maryland is located at the northern periphery of the species' predominately Southeastern and Midwestern range.

Maryland stations are few, populations existing in areas of high-quality riparian habitats along the upper Choptank River and the Potomac

Gorge.

**Habitat**: Flood channel sloughs, floodplain pools.

**Distr**. CP, PD (Caroline, Montgomery).

Flw: Jun-Jul; Fr: late Jul-Sept.

#### Elatine americana (Pursh) Arnott

American Waterwort

G4

SU

Elatinaceae (Waterwort Family)

**Taxnote:** Several older specimens were initially identified as *Elatine triandra* Schkuhr (recently resurrected as a distinct species), which later became lumped into a broader concept of *E. americana*. Nearly all of the identifications reported to the Service were determined without considering *E. triandra*. Thus, our records are potentially a mix of two different taxa. However, Popiella et al. (2015) reference two environmentally-induced morphs of *E. triandra* in Europe, which may correspond to these putative "species". Field and museum work will be required to sort out the distributions and abundances.

**Cons/Econote**: An inconspicuous annual plant of intertidal habitats. Population size (and detectability) may vary greatly over years, which is typical of species with an annual life history. Suspected of declining due to shoreline erosion (boat wakes), physical changes in the structure of shoreline sediments, and shading/competition with mats of invasive species such as *Hydrilla*.

**Habitat**: Fresh to brackish intertidal shores, on a variety of substrates, exposed mud flats, fringing areas of sandy, gravelly or organic substrates exposed at low tide. Additionally, *E. triandra* has been confirmed (by Hamid Raziford) from a shoreline of Deep Creek Lake in Garrett County.

**Distr**. AP, CP (Caroline, Cecil, Dorchester, Garrett, Harford\*, Prince George's\*, Wicomico, Worcester; distribution incomplete).

#### Elatine minima (Nuttall) Fischer & C.A. Meyer!

Small Waterwort

G5

S1? E(PD)

Elatinaceae (Waterwort Family)

**Cons/Econote**: This northeastern species was thought to be extremely rare south of the glacial lakes and ponds in Pennsylvania (where common). However, recent surveys have discovered stations on lake shorelines in Garrett County and the species may be overlooked in anthropogenic habitats. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Fresh intertidal shores in sandy or gravelly substrates; shorelines of reservoirs and ponds. Water depths where the plant grows vary from a few centimeters to 0.6 meters (Block & Rhoads 2011).

**Distr**. AP, CP, PD (Carroll?, Cecil, Dorchester, Garrett, Harford, Wicomico\*).

#### Eleocharis albida Torrey

White Spikerush

G4G5

**S2S3** 

Cyperaceae (Sedge Family)

**Cons/Econote**: An inconspicuous and oft-overlooked component of fresh to brackish marshes along the Atlantic Coast and the Chesapeake Bay. Attrition of salt marsh habitats due to sea level rise poses a substantial threat, the severity of which can only be speculated upon.

**Habitat**: Fresh to brackish salt marshes. Muddy flats or ecotones between low, e.g. black needlerush (*Juncus roemerianus*) and high, e.g., salt-marsh hay (*Spartina patens*) marsh; tidal guts.

**Distr**. CP (Anne Arundel\*, Charles\*, Dorchester, Kent, Queen Anne's\*, St. Mary's\*, Somerset, Wicomico, Worcester).

Flw: late Aug-early Sept; Fr: Sept-Oct.

#### Eleocharis compressa Sullivant

Flat-stem Spikerush

G4

S1 E

Cyperaceae (Sedge Family)

**Taxnote**: Maryland plants are var. compressa

Cons/Econote: Extremely rare plant in the eastern U.S. A plant of rich glades and river scour bars (Potomac and Susquehanna Rivers).

Habitat: Pools among rocks on bedrock scour bars.

**Distr**. PD (Cecil, Montgomery).

## Eleocharis engelmannii Steudel

Engelmann's Spikerush

G4G5

**S**3

Cyperaceae (Sedge Family)

**Habitat**: Freshwater marshes, low woods, ditches and pond shores.

**Cons/Econote**: Not often distinguished from the more common *E. obtusa*; the number of collections suggests the species is more common than the current rank but many of these collections would be considered historical.

**Distr**. CP, PD, RV (Anne Arundel, Calvert, Caroline, Cecil, Charles, Dorchester, Frederick, Harford, Montgomery, Prince George's, Queen Anne's, St. Mary's, Talbot, Wicomico, Worcester; distribution likely incomplete).

# Eleocharis equisetoides (Elliott) Torrey

Horsetail Spikerush

G4

S1 E

Cyperaceae (Sedge Family)

Cons/Econote: Endangered by woody succession of bog-like habitats.

Habitat: Acidic seepage fens, millponds.

**Distr**. CP (Wicomico, Worcester).

#### Global State State Federal Common Name Rank Rank Status Status Scientific Name **Bald Spikerush** G5 Eleocharis erythropoda Steudel SU

Cyperaceae (Sedge Family)

Syn: E. calva Torrey, an invalid name.

Cons/Econote: Apparently rare in our region (DE, VA). The conservation status and rank for this species requires additional field and museum work.

Habitat: Freshwater fens, seeps.

**Distr**. CP, PD\* (Cecil\*, Dorchester, Howard\*, Montgomery\*).

#### Eleocharis halophila (Fernald & Brackett) Fernald

Saltmarsh Spikerush

G4

Ε

**S**1

Cyperaceae (Sedge Family)

Cons/Econote: A single known extant population, restricted to the barrier island (Assateague). There are several additional reports from inland locations, these doubtful.

**Habitat**: Interdunal swales behind foredunes.

**Distr**. CP (Worcester).

#### Eleocharis intermedia J.A. Schultes

Matted Spikerush

G5

**S**1

Ε

Cyperaceae (Sedge Family)

Cons/Econote: The habitat for this species is exacting, occurring at a single site in Maryland.

**Habitat**: Lake shoreline (Loch Raven) over calcareous soils.

Distr. PD (Baltimore).

# Eleocharis melanocarpa Torrey

Black-fruit Spikerush

G4

**S**1

E

Cyperaceae (Sedge Family)

Cons/Econote: Endangered by habitat loss and wetland conversion over the long-term and woody sucession of habitats in the near-term.

Habitat: Delmarva Bays and acidic seepage fens.

**Distr**. CP (Caroline, Cecil, Dorchester, Queen Anne's, Talbot\*, Wicomico, Worcester).

#### Eleocharis robbinsii Oakes

Robbins' Spikerush

G4G5

**S**1 Ε

Cyperaceae (Sedge Family)

Cons/Econote: Extremely rare in our region (DE, VA) and endangered in Maryland by habitat loss. Fire exclusion and other landscapescale disturbance processes may be under-appreciated. For example, W. Knapp (NHP records) discovered thousands of stems in newly available habitat after a millpond dam was breached. All sites require periodic disturbance to maintain open-canopy wetland habitat.

**Habitat**: Coastal Plain acidic seepage fens, Delmarva Bays, millponds.

**Distr**. CP (Dorchester, Wicomico).

#### Global State State Federal Common Name Rank Rank Status Status Scientific Name Eleocharis rostellata (Torrey) Torrey G5 Beaked Spikerush S2?

Cyperaceae (Sedge Family)

Cons/Econote: Locally abundant in brackish marshes on the barrier island (Assateague), this species is apparently tolerant of a wider range of salinities than previously considered. However, the species appears to be rare elsewhere.

**Habitat**: Interdunal swales (Assateague), fresh to brackish tidal marshes and sea level fens.

**Distr**. CP (Anne Arundel, Baltimore, Calvert\*, Queen Anne's, Wicomico, Worcester).

#### Eleocharis tortilis (Link) J.A. Schultes

Twisted Spikerush

G5

**S**3

Cyperaceae (Sedge Family)

**Habitat**: Acidic seepage fens and swamps in sand, gravel and muck substrates.

Distr. CP (Baltimore, Calvert, Caroline, Charles, Prince George's, St. Mary's, Wicomico, Worcester).

#### Eleocharis tricostata Torrey

Three-angle Spikerush

G4

S1

Е

Cyperaceae (Sedge Family)

Cons/Econote: Maryland stations for this plant are threatened by encroaching stands of common reed (*Phragmites australis*) and woody succession of wetland habitat. Habitats for this species in Maryland range from fairly pristine to heavily disturbed coastal wetlands (e.g., bulldozed wetlands, borrow pits).

**Habitat**: Seasonally flooded flatwoods (under *Nyssa biflora*) and depressions, sandpits.

**Distr**. CP (Caroline, Dorchester).

#### Elephantopus tomentosus Linnaeus

Tobaccoweed

G5

S1

Ε

Asteraceae (Aster Family)

Cons/Econote: Maryland stations are the northern limits of the species' range but occur in habitat typical for the species in the core range in the southeastern U.S. More survey is warranted. Attributed to the Eastern Shore by Brown & Brown (1984) based upon misidentified specimens (=E. nudatus). The earliest collection (1904) by M.A. Chrysler does not indicate a county of collection but is presumably St. Mary's.

**Habitat**: Dry upland forest edges, clearings, trailsides and roadsides.

**Distr**. CP (Calvert, St. Mary's).

Flw: Sept; Fr: Sept-Oct.

# Epilobium ciliatum Rafinesque!

Hairy Willowherb

G5

S3S4 E(PD)

Onagraceae (Evening Primrose Family)

Svn: E. glandulosum Lehm. var. adenocaulon (Haussknect) Fernald

Taxref: Fernald (1950).

**Taxnote**: Maryland plants are morphologically variable and may show intergradation with other species. Often confused with E. coloratum, reports from Baltimore County (wet old field) and Cecil County (wharves and waste ground) reflect this confusion.

**Cons/Econote**: Somewhat weedy. Associated with both heavily disturbed and high-quality acidic wetlands. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Acidic seeps, bogs, and fens.

Distr. AP, CP (Charles, Garrett, Worcester).

Flw: Aug-Sept; Fr: late Sept-Nov.

# Epilobium leptophyllum Rafinesque

Linear-leaf Willowherb G5 S2S3

Onagraceae (Evening Primrose Family)

Cons/Econote: Confined to high-elevation wetlands in w. Maryland; scarce in the Catoctin Mountains according to Wiegand (2005).

Habitat: Seeps, minerotrophic fens and sedge meadows.

**Distr**. AP, RV (Frederick, Garrett).

#### Epilobium strictum Muhlenberg ex Sprengel

Downy Willowherb G5? S1 E

Onagraceae (Evening Primrose Family)

**Cons/Econote**: A single known extant station.

Habitat: Minerotrophic fen.

**Distr**. AP, PD\* (Cecil\*, Garrett).

#### Equisetum fluviatile Linnaeus

Water Horsetail

G5

S1 E

Equisetaceae (Horsetail Family)

**Cons/Econote**: Circumboreal, Occurring south to Virginia (where it occurs in montane calcareous marshes). The Maryland station is similar in habitat to sites well to our north. Apparently always rare in Maryland, known from a small area of exceptional tidal marsh shoreline habitat in the Upper Chesapeake Bay. Reported by Reed (1953) from Harford County (specimen not seen).

Habitat: Freshwater emergent tidal marsh.

**Distr**. CP/PD (Cecil, Harford?).

## Equisetum sylvaticum Linnaeus

Woodland Horsetail

G5

S1 E

Equisetaceae (Horsetail Family)

**Cons/Econote**: Circumboreal, occurring south to MD and adjacent WV and scattered stations in VA. In Maryland the plant is restricted to a few small habitat patches with few stems.

**Habitat**: Seepage swamps. Maryland stations hold a diverse flora and occur presumably over nutrient-rich though not calcareous substrates.

**Distr**. AP, PD\*, RV (Baltimore\*, Frederick, Garrett).

# Eragrostis refracta (Muhlenberg) Scribner

Meadow Lovegrass

G5

S3S4

Poaceae (Grass Family)

**Habitat**: Dry, sterile sands, locally common in maritime grasslands, shrublands and woodlands on the barrier island (Assateague).

Distr. CP (Caroline, Wicomico, Worcester).

Erigenia bulbosa (Michaux) Nuttall

Harbinger-of-Spring

G5

**S**3

Apiaceae (Carrot Family)

**Cons/Econote**: Appearing in late March and early April this species has areas of local abundance but the small stature of the plant and the early flowering dates place it among those spring ephemerals that are rarely observed. However, the finely divided leaves of this species are very recognizable upon study and the species may be efficiently surveyed outside of its flowering time.

**Habitat**: Rich floodplain forests and mesic upland forests, particularly in areas dominated by calcium-bearing substrates. The extensive populations near Widewater at Great Falls may be associated with sills of amphibolite.

**Distr**. CP, PD, RV (Allegany, Cecil, Charles, Frederick, Harford, Montgomery, Prince George's, Washington).

Flw: late Mar-early Apr; Fr: May-Jun.

Erigeron pulchellus Michaux var. brauniae Fernald

Braun's Robin's-plantain

G5T4

**S**1

Asteraceae (Aster Family)

**Taxnote**: Differing from the typical and common variety by glabrous stems and leaves; the taxonomic significance of this variation has not been well studied.

Cons/Econote: Known only from w. MD, WV, s. OH and KY.

Habitat: Riverside scour bar.

Distr. AP (Garrett).

Flw: late May-early Jun; Fr: Jun.

Eriocaulon aquaticum (Hill) Druce

Seven-angle Pipewort

G5

S1 E

Eriocaulaceae (Pipewort Family)

Syn: E. septangulare Withering, an invalid name

**Cons/Econote**: A common plant in s. Canada and New England, the southern populations are insular and probably relictual occurrences from post-Wisconsinan glacial retreat.

**Habitat**: Baymouth barrier wetland (Sipple 1982, historical), millponds, in floating peat mats.

**Distr**. CP (Anne Arundel\*, Dorchester, Wicomico\*).

Eriocaulon compressum Lamarck

Flattened Pipewort

G5

**S**2

Eriocaulaceae (Pipewort Family)

**Cons/Econote**: Local to a small zone of swamps and seeps. The northern stations for this species (MD, DE and NJ) are somewhat disjunct from the species primarily southeastern coastal plain range.

**Habitat**: Acidic seeps, Atlantic white cedar (*Chamaecyparis thyoides*) swamps.

Distr. CP (Wicomico).

#### State State Federal Global Common Name Rank Status Status Scientific Name Rank Eriocaulon decangulare Linnaeus! Ten-angle Pipewort G5T5? **S**1

Eriocaulaceae (Pipewort Family)

**Taxnote**: Maryland plants are var. decangulare.

Cons/Econote: Local in remnants of once widespread Fall Line "magnolia bogs" and in an extraordinary sea level fen in Worcester County. Shreve (1910) reported the species as infrequent and notes two stations; a peat "bog" in Anne Arundel County and a marsh along the Nanticoke River (near Vienna) in Wicomico County, neither of which is extant. The Service is currently reviewing this species' conservation status.

Habitat: Gravel seepage bog, "magnolia bog" sensu McAtee (1918); sea level fen.

**Distr**. CP, PD\* (Anne Arundel\*, Montgomery\*, Prince George's, Wicomico\*, Worcester).

#### Eriocaulon parkeri B.L. Robinson

Parker's Pipewort

G3

**S**2

T

Eriocaulaceae (Pipewort Family)

Cons/Econote: Declining rangewide (extirpated in PA and NY) and under threat in the Chesapeake Bay due to increased sedimentation, eutrophication, boat wakes, displacement by common reed (*Phragmites australis*) and shading by mats of *Hydrilla* in the intertidal zone. A re-assessment of Maryland populations and their conservation status is ongoing.

**Habitat**: Gravelly and sandy intertidal zones along fresh to oligohaline marshes of the Chesapeake Bay and tributaries.

Distr. CP (Baltimore, Caroline, Cecil, Charles\*, Dorchester, Harford, Wicomico, Worcester).

# Eriophorum gracile W.D.J. Koch ex Roth

Slender Cottongrass

G5

**S**1

Ε

Cyperaceae (Sedge Family)

Cons/Econote: The Maryland station represents the southernmost population in the U.S. Endangered by woody succession of open sedge meadow habitat.

**Habitat**: High elevation mountain peatlands.

Distr. AP (Garrett).

Flw/Fr: Jun.

## Eriophorum virginicum Linnaeus

**Tawny Cottongrass** 

G5

**S**3

Cyperaceae (Sedge Family)

Cons/Econote: A characteristic species of mountain peatlands (Garrett County) and once a common species of "magnolia bogs" sensu McAtee (1918) along the Fall Line; rare elsewhere.

**Habitat**: Mountain peatlands, coastal fens and acidic seepage swamps.

Distr. AP, CP, PD\*, RV (Allegany, Anne Arundel, Garrett, Montgomery\*, Prince George's, Wicomico).

Flw/Fr: late Aug-Nov.

## Eryngium yuccifolium Michaux

Rattlesnake-master

G5

SHX

Apiaceae (Carrot Family)

Cons/Econote: Represented in the Maryland flora by a few collections along the Potomac River over the period 1904-1921.

**Habitat**: Sandy depressions between rock ledges, sandy banks. Introduced into warm-season grass plantings at Chino Farms (Queen Anne's County).

**Distr**. CP<sup>I</sup>, PD\* (Montgomery\*, Queen Anne's<sup>I</sup>).

## Erythronium albidum Nuttall

White Trout Lily

G5

S2 T

Liliaceae (Lily Family)

**Cons/Econote**: According to Wiegand (2010) the preferred habitat for this species is often heavily invaded by ground ivy (*Glechoma hederacea*), English ivy (*Hedera helix*), day lily (*Hemerocallis fulva*) and garlic mustard (*Alliaria petiolata*). Several large populations in Frederick County have declined as a result of invasion by day lily and garlic mustard.

Habitat: Mature floodplain terrace forests in rich alluvium.

Distr. PD, RV (Allegany, Cecil\*, Frederick, Montgomery, Washington).

Flw: late Mar-late Apr: Fr: May

# Eupatorium altissimum Linnaeus

Tall Boneset

G5

**S**3

Asteraceae (Aster Family)

**Habitat**: Montane alluvial forest, scoured bedrock terrace prairies and woodlands, rocky ravines and cliffs in rich alluvial sand and silt; serpentine and diabase barrens.

Distr. CP, PD, RV (Allegany, Anne Arundel, Baltimore, Carroll, Cecil, Montgomery, Washington).

Flw: Sept; Fr: Oct.

Eupatorium leucolepis (A.P. de Candolle) Torrey & Gray

White-bracted Boneset

G5

S2S3 T

Asteraceae (Aster Family)

White-bracted Thoroughwort

**Cons/Econote**: An early successional species, intolerant of shade. There are few truly protected populations and although some large populations exist in recently logged sites these disappear upon canopy closure.

Habitat: Wet pine flatwoods and graminoid-dominated swales (under powerlines and roadsides).

**Distr**. CP (Baltimore\*, Dorchester, Prince George's\*, Wicomico, Worcester).

Flw: (Jul) Aug-early Sept; Fr: Sept.

Euphorbia purpurea (Rafinesque) Fernald

Glade Spurge

G3

S1 E

Euphorbiaceae (Spurge Family)

Darlington's Spurge

**Cons/Econote**: Endangered by habitat loss, damage by off-road vehicles and competition with invasive species. There have been significant declines (or failure to find) at nearly all known stations. Heavy browsing by white-tailed deer prompted the Service to employ caging of plants to increase reproductive output.

Habitat: Circumneutral seepage swamps.

**Distr**. PD, RV (Baltimore\*, Carroll\*, Cecil, Frederick, Harford).

Flw: mid-May-mid Jun: Fr: Jul-Aug.

Euphorbia spathulata Lamarck Euphorbiaceae (Spurge Family) Warty Spurge Bluntleaf Spurge G5 S1 E

Syn: E. dictyosperma Fischer & Meyer

Euphorbia obtusata Pursh, misapplied?

**Taxnote**: Maryland plants, of dry woodlands and barrens, are *S. spathulata* Lamarck. *E. obtusata*, a plant of rich bottomland forests may not occur in Maryland although both names are often applied.

**Cons/Econote**: Occurring as scattered patches with few individuals. Fire suppression may play a role in this species' rarity.

Habitat: Rich, dry woodlands and shale barrens.

Distr. CP\*, PD\*, RV (Allegany, Montgomery\*, Prince George's\*, Washington).

Eurybia radula (Aiton) Nesom

Low Rough Aster

G5

S1 E

Asteraceae (Aster Family)

Rough Wood Aster

Cons/Econote: Endangered by habitat loss, woody succession of bog-like habitat. Few Maryland stations occur on protected lands.

Habitat: Acidic seepage wetlands.

**Distr**. AP, CP, PD, RV (Cecil, Frederick, Garrett, Harford\*, Montgomery\*, Prince George's).

Flw: Aug; Fr: Sept-Oct.

Eurybia spectabilis (Aiton) Nesom

Low Showy Aster

G5

S1 E

Asteraceae (Aster Family)

Cons/Econote: Endangered by poor protection status and additionally, little control over management.

**Habitat**: Openings and clearings in sandy/peaty soils adjacent to pine flatwoods (chiefly roadsides).

**Distr.** CP (Dorchester, Wicomico).

**Flw**: late Aug-early Oct; **Fr**: Oct-Nov.

Eutrochium maculatum (Linnaeus) E.E. Lamont

Spotted Joe-pye Weed

G5

SU X

Asteraceae (Aster Family)

Syn: Eupatorium maculatum Linnaeus

Cons/Econote: Reports from the Coastal Plain and Piedmont are doubtful considering the geographic range for this species. Reports from acidic sites are doubtful considering that the species is apparently an obligate calciphile (e.g., calcareous fens). A 1906 collection by E. Braun from a now extirpated site in Garrett County (Mtn. Lake Park) may be our only valid record. Reports of plants from high elevation acidic wetlands in Garrett County (Cranesville Swamp) may indicate the presence of a cryptic taxon, as suggested by Weakley (2015) for the S. Appalachians.

State State Federal Global Scientific Name Common Name Rank Rank Status Status **Habitat**: Calcareous fen (apparently). **Distr**. AP\*, RV? (Garrett\*, Frederick?). Fallopia cilinodis (Michaux) Holub Fringed Black-bindweed **S**3 G5 Polygonaceae (Smartweed Family) **Syn**: *Polygonum cilinode* Michaux **Habitat**: Clearings, outcrops and woodlands at high elevations. Distr. AP (Garrett). Flw/Fr: Jun. Cluster Fescue G5 **S**1?

Festuca paradoxa Desvaux Poaceae (Grass Family)

Syn: F. shortii Kunth ex Woods

**Cons/Econote**: The Service is uncertain of the distribution in Maryland. Many reports are based upon confusion with the common *F. subverticillata*. The Charles County record may indicate a wider ecological amplitude for the species which would require reconciliation with regional records.

**Habitat**: Streambanks, commonly associated with mafic or ultramafic substrates.

**Distr**. AP?, CP, PD\*, RV? (Anne Arundel?, Allegany?, Baltimore?, Cecil\*, Charles, Garrett?).

#### Filipendula rubra (Hill) B.L. Robinson

Queen-of-the-prairie

G4G5

S1 E

Rosaceae (Rose Family)

**Cons/Econote**: Endangered by habitat loss and excessive browse by white-tailed deer. Very rare regionally and apparently always rare in Maryland, this species occupies significantly rare habitat types.

**Habitat**: Circumneutral seepage/fen. Historical collections from a Baltimore County site (now extirpated) record the habitat as a "wet field" [associated with fringed gentian (*Gentianopsis crinita*)] suggesting that the site was underlain by serpentine.

Distr. PD\*, RV (Baltimore\*, Frederick).

#### Fimbristylis annua (Allioni) Roemer & J.A. Schultes

Annual Fimbry

G5

**S**3

Cyperaceae (Sedge Family)

Syn: F. baldwiniana (J.A. Schultes) Torrey

**Cons/Econote**: Widespread in tropical and warm temperate regions and arguably native. Often a plant of heavily disturbed sterile soils; our populations are known mainly from serpentine grasslands.

**Habitat**: Serpentine barrens.

Distr. CP\*, PD (Baltimore, Carroll, Cecil, Harford, Montgomery\*, Prince George's\*, St. Mary's?, Wicomico\*).

#### State State Federal Global Common Name Scientific Name Rank Rank Status Status Fimbristylis caroliniana (Lamarck) Fernald G4 Carolina Fimbry S1S2

Cyperaceae (Sedge Family)

**Taxnote**: Previously lumped with F. puberula following Fernald (1950), this species is chiefly maritime and may be distinguished by its long rhizomes, contrasted with an inland distribution and the short rhizomes of F. puberula.

**Cons/Econote**: Apparently restricted to the barrier island (Assateague).

Habitat: Maritime grassland.

**Distr**. CP (Worcester).

# Fimbristylis perpusilla R.M. Harper ex Small & Britton

Harper's Fimbristylis

G2

**S**2

Ε

Cyperaceae (Sedge Family)

Cons/Econote: Within its Delmarva Bay habitat the species is restricted to the lowest depressions, often quite small (1-10 sq meters), associated with little or no other vegetation. Alterations to historical patterns of ground-water hydrology pose a severe and persistent threat. Additionally, exotic species such as the Eurasian rough-seed bulrush (Schoenoplectiella mucronata) and perhaps even some aggressive natives such as Walter's sedge (Carex striata) may invade the habitat preferred by this species.

**Habitat**: Muddy soils in the central portions of Delmarva Bays (after drawdown).

Distr. CP (Caroline, Kent, Queen Anne's).

#### Fimbristylis puberula (Michaux) Vahl

Hairy Fimbristylis

G5

SU

Cyperaceae (Sedge Family)

Syn: F. spadicea (Linnaeus) Vahl

Cons/Econote: Collected along the shore of the Chesapeake Bay (Breezy Point) by F.J. Hermann in 1938 (specimen not seen).

**Habitat**: A plant of pine flatwoods and meadows and perhaps overlooked. Additional field and museum work is needed.

**Distr**. CP\*? (Calvert\*?, St. Mary's\*).

#### Fraxinus caroliniana P. Miller

Carolina Ash

G4G5

**S**2

Oleaceae (Olive Family)

Cons/Econote: Characteristic subcanopy trees of the southeastern Atlantic Coastal Plain; Maryland populations are the northern range extent for the species. This species and others in the family are under threat of extirpation by the emerald ash borer beetle (Agrilus planipennis Fairmaire).

**Habitat**: Local to a narrow zone of blackwater swamps under bald cypress (*Taxodium distichum*) along the Pocomoke River.

**Distr**. CP (Worcester).

Fr: Jun-Jul.

Fraxinus nigra Marshall

Black Ash

G5

**S**3

Oleaceae (Olive Family)

Scientific Name Global State State Federal
Common Name Rank Rank Status Status

**Cons/Econote:** This northern tree species occurs near the southern periphery of its range in MD, VA and WV. Infrequent and localized, this chiefly montane species becomes increasingly rare throughout the Piedmont with outliers extending onto the Coastal Plain. Populations are currently threatened by the emerald ash borer (*Agrilus planipennis* Fairmaire) a highly destructive non-native beetle of Asia and Eastern Russia.

**Habitat:** Localized seepage swamps influenced by calcareous (e.g., calcareous shales, limestone, marine deposits) or mafic (e.g., Catoctin metabasalt, diabase, amphibolite) material.

Distr. AP, CP, PD, RV (Allegany, Baltimore, Caroline, Cecil\*, Frederick, Garrett, Harford, Montgomery, Queen Anne's, Washington).

#### Fuirena pumila (Torrey) Sprengel

Dwarf Umbrella-sedge

G4

S2S3

Cyperaceae (Sedge Family)

**Cons/Econote**: Occurring in a variety of wetland habitats, this species undergoes extreme fluctuations in population size. W. Knapp (NHP records) recorded many thousands to hundreds of thousands of individuals in a recently drained millpond bottom in Dorchester County. Sensitive to salt water intrusion, the Service could not relocate the Calvert County population after the narrow sand dike separating the fresh water marsh from the waters of the Chesapeake Bay was breached after Hurricane Isabelle in 2005.

Habitat: Fresh tidal marshes and interdunal swales (Assateague Island), millponds, clearings, in sandy, peaty or muck soils.

**Distr**. CP (Calvert, Dorchester, Wicomico, Worcester).

Flw: Aug-Sept; Fr: Sept-Oct.

#### Galactia volubilis (Linnaeus) Britton

Downy Milkpea

G5

**S**3

Fabaceae (Legume Family)

**Cons/Econote**: Although represented by many populations, and with many of those in anthropogenic habitats, this species always occurs in low numbers and may be under decline due to fire exclusion.

Habitat: Dry sandy woodlands, clearings, roadsides.

**Distr**. CP, PD (Anne Arundel, Calvert, Caroline, Charles\*, Howard\*, Montgomery, St. Mary's, Talbot\*, Wicomico, Worcester; distribution likely incomplete).

## Galax urceolata (Poiret) Brummitt

Beetle-weed

G5

SX

Diapensiaceae (Diapensia Family)

Cons/Econote: The English naturalist, John Ray, was the first to describe native Maryland plants publishing a description of *Tillandsia usneoides* in 1688 wherein Ray discussed *Galax urcelolata* (Brown et al. 1987). Ray did not collect these plants in Maryland himself, he was sent collections and information by several colonial-era botanists and *G. urceolata* is in the catalogue of Maryland plants H.S. 91:35 BM (see Reveal et al. 1987, p. 157). According to Brown et al. (1987) "apparently the colonial naturalists collected only on the coastal plain of Maryland—in modern day Anne Arundel, Calvert, Prince George's and St. Mary's counties on the Western Shore and Talbot and Dorchester counties on the Eastern Shore." Most importantly they state (p. 248) "as the geographic attributions accompanying their specimens always refer to Maryland, we can only conclude that the species known today only from southeastern Virginia must have

Scientific Name Common Name Rank Rank Rank Status Status Status Occurred in Maryland in the past." The attribution to Maryland of this species is thus confirmed by a Maryland specimen—from the Coastal Plain. The previous attribution to western Maryland (Brown & Brown 1984) has no basis.  Habitat: Mesic to dry hardwood forests associated with ericads (Virginia botanical Associates), most likely Kalmia latifolia.  Distr. CP* (unknown county in s. MD).				
Galium boreale Linnaeus Rubiaceae (Madder Family) Cons/Econote: Endangered by habitat loss and displacement by i Habitat: Outcrops and barrens over mafic (limestone) or ultrama: Distr. AP*, PD, RV (Cecil, Garrett*, Washington).		G5	S1	E
Galium hispidulum Michaux Rubiaceae (Madder Family) Cons/Econote: A small fragile population is extant on the barrier Habitat: Maritime dune woodlands. Distr. CP (Worcester).	Coast Bedstraw island (Assateague).	G5	S1	Е
Galium latifolium Michaux Rubiaceae (Madder Family) Habitat: Rich, mesic hardwood forests, montane alluvial forest. Distr. PD, RV (Allegany, Baltimore, Frederick, Washington).	Purple Bedstraw	G5	S3	
Gaultheria hispidula (Linnaeus) Muhlenberg ex Bigelow Ericaceae (Heath Family) Cons/Econote: A single known occurrence. Habitat: Mountain peatland clamoring over hummocks of red spr. Distr. AP (Garrett).	Creeping Snowberry ruce ( <i>Picea rubens</i> ).	G5	<b>S</b> 1	E
Gaylussacia brachycera (Michaux) A. Gray Ericaceae (Heath Family)	Box Huckleberry	G3	S1 .	Е

**Cons/Econote**: Endangered by habitat loss long-term and excessive animal browse in the near term. Known from a single site that has been extant for over 100 years (Plitt 1900). Maryland and Delaware populations form a cohesive genetic cluster (Pooler et al. 2006).

**Habitat**: Dry sandy woods. **Distr**. CP (Anne Arundel).

# Scientific Name Common Name Rank Rank State State Federal Rank Rank Status Status

Ericaceae (Heath Family)

Syn: G. bigeloviana (Fernald) Sorrie & Weakley

G. dumosa (Andrews) Torrey var. dumosa

G. dumosa (Andrews) Torrey var. bigeloviana Fernald

**Taxnote**: Most populations may be referable to *G. bigeloviana*; however, one collection from a historic Baltimore County station appears to be *G. dumosa* in the strict sense. Sorrie and Weakley (2007a) discuss the geographic range and habitats for these taxa.

**Cons/Econote**: Endangered by habitat loss. The majority of our populations occurred historically in Fall Line seeps and stream-head fens in areas that are now heavily urbanized.

Habitat: Seepage swamps in sandy/peaty soils.

**Distr**. CP (Anne Arundel\*, Baltimore\*, Prince George's, Wicomico, Worcester).

Flw: mid-late May; Fr: Jun-Jul.

#### Gentiana andrewsii Grisebach

Fringe-top Bottle Gentian G5? S2

T

Gentianaceae (Gentian Family)

**Cons/Econote**: Threatened by habitat loss primarily due to woody succession, deer browse, competition with invasive species and poor protection status.

**Habitat**: Freshwater marshes, meadows, open-canopy swamps.

**Distr**. AP\*, CP, PD, RV (Allegany, Baltimore, Cecil\*, Charles\*, Frederick, Garrett\*, Harford, Montgomery, Prince George's, Washington\*).

Flw: late Sept-Oct; Fr: Nov.

#### Gentiana linearis Frölich

Narrowleaf Gentian G4G5 S3

Gentianaceae (Gentian Family)

Cons/Econote: Occurring in Maryland in peripheral populations (relative to the North American range) but frequent in habitat.

Habitat: Mountain peatlands and swamps.

**Distr**. AP (Garrett). **Flw**: Sept; **Fr**: Oct-Nov.

# Gentiana puberulenta J. Pringle

Downy Gentian G4G5 SH X

Gentianaceae (Gentian Family)

Cons/Econote: A striking disjunct from the midwestern U.S., last collected in 1888.

Habitat: No habitat description on the specimen label, presumably a prairie-like site.

**Distr**. AP\* (Garrett\*).

#### State State Federal Global Scientific Name Common Name Rank Status Status Rank Gentiana villosa Linnaeus G4 **Striped Gentian S**1 Ε

Gentianaceae (Gentian Family)

Cons/Econote: Endangered by habitat loss. Our few extant stations comprise few plants and these are often subject to intense deer browse. Additionally, fire suppression likely plays a role in this species' rarity. The Caroline County station has not been relocated for over a decade.

**Habitat**: Dry, sandy edges of pine forests, dry forest over serpentine. Plants often along rights-of-way.

**Distr.** CP, PD, RV? (Anne Arundel\*, Baltimore\*, Caroline, Cecil\*, Charles\*, Montgomery, Prince George's\*, Washington?).

Flw: Sept; Fr: Oct-Nov.

# Gentianella quinquefolia (Linnaeus) Small

Stiff Gentian

G5

**S**1

E

Gentianaceae (Gentian Family)

Cons/Econote: Endangered by habitat loss and woody succession of meadow/field habitats.

**Habitat**: Fields, clearings and roadbanks at high elevations.

Distr. AP (Garrett). Flw: Sept; Fr: Oct-Nov.

#### Gentianopsis crinita (Frölich) Ma

Fringed Gentian

G5

**S**1

Ε

Gentianaceae (Gentian Family)

Cons/Econote: Threatened with extinction in Maryland, our remaining population has dwindled to fewer than two hundred plants over the last two decades. Factors responsible for decline are probably a combination of demographic, genetic, biotic and abiotic stressors.

Habitat: Seepages and streamsides over ultramafic rocks.

**Distr**. AP\*, PD (Baltimore, Cecil\*, Garrett\*). Flw: late Sept-early Oct; Fr: Oct-early Nov.

# Geranium robertianum Linnaeus

Herb-Robert

G5

**S**1

Geraniaceae (Geranium Family)

Cons/Econote: Diverse and often conflicting opinions are expressed regarding the nativity of this species to the U.S. and Canada, not only among individual Heritage programs but also among basic botanical references. Considered native in the talus slopes of the Catoctin Mountains but the Service is unsure of the nativity of some stations.

**Habitat**: Talus slopes, oyster shell midden.

**Distr**. CP, RV (Frederick, Somerset; distribution incomplete).

Flw: mid-Apr; Fr: early May

# Geum aleppicum Jacquin

Yellow Avens

G5

S1Ε

Rosaceae (Rose Family)

Syn: G. strictum Aiton

Scientific Name Common Name Global State State Federal Rank Rank Status Status

G. aleppicum Jacquin var. strictum (Aiton) Fernald

**Cons/Econote**: Circumboreal, occurring south to NJ and in the Appalachians to NC. Reported from a number of coastal and Piedmont stations in Maryland, these well outside of the known range and doubtful.

**Habitat**: High elevation seepage swamps.

Distr. AP (Garrett).

Geum laciniatum Murray

Rough Avens

G5

**S**3

Rosaceae (Rose Family)

**Habitat**: Floodplain forests in rich alluvial soil, wet meadows and localized rich woods "pockets" on the Coastal Plain.

Distr. CP, PD, RV (Baltimore, Cecil, Dorchester, Frederick, Howard, Montgomery, Prince George's\*).

Glaux maritima Linnaeus

see Lysimachia maritima (Linnaeus) Galasso, Banfi, & Soldano

Glyceria acutiflora Torrey

Sharp-scaled Mannagrass

G5

S1 E

Poaceae (Grass Family)

**Cons/Econote**: Endangered by habitat loss, chiefly woody succession of open-pond habitat. Maryland populations are similar in that all known stations are seasonal ponds but these differ greatly in terms of their geological formation and plant associates.

Habitat: Sinkhole ponds (Ridge and Valley), Delmarva Bays (Coastal Plain).

Distr. CP, RV (Caroline, Kent, Frederick, Queen Anne's, Washington).

Glyceria grandis S. Watson

Poaceae (Grass Family)

American Mannagrass

G5

S1 E

**Cons/Econote**: Maryland populations are along the southern periphery of range (extending into VA, WV). Little known, reported from few stations along the MD/WV border (Herrington Creek headwaters, Kempton).

**Habitat**: Mountain peatland; montane headwater swamps.

Distr. AP (Garrett).

Gonolobus suberosus (Linnaeus) R. Brown var. suberosus

Angular-fruit Milkvine

G5

**S**2

Apocynaceae (Dogbane Family)

Syn: Matelea gonocarpos (Walter) Shinners

Gonolobus gonocarpus (Walter) Perry

Matelea suberosa (Linnaeus) Shinners

**Cons/Econote**: Maryland populations represent the northeastern limits of the species' range. Few populations are known and the species appears highly localized in s. MD (Western Shore).

**Habitat**: Rich woods, shell-marl ravine forests, field edges.

State State Federal Global Scientific Name Common Name Rank Rank Status Status

Distr. CP, PD (Calvert, Charles, Montgomery, St. Mary's).

**Flw**: late Jun-mid Jul; **Fr**: late Sept-early Oct.

Goodyera repens (Linnaeus) R. Brown

Dwarf Rattlesnake-plantain G5

SH X

Orchidaceae (Orchid Family)

Cons/Econote: Circumboreal, occurring in Maryland in the discontinuous part of its southern range along the Appalachian Mountains. Last collected by G. M. Perdew in Allegany County (1904), presumably on the Appalachian Plateau, and by J.B.S. Norton near Bittinger in Garrett County (1908). The basis for inclusion in the flora of the Washington-Baltimore area not known (Shetler & Orli 2000).

Habitat: No mention of habitat on the labels, but presumably northern hardwood forests.

**Distr**. AP\* (Allegany\*, Garrett\*).

Goodyera tesselata Loddiges

Checkered Rattlesnake-

G5

SHX

Orchidaceae (Orchid Family)

plantain

Cons/Econote: A northeastern species reaching its historical range limit in Maryland. Last collected in 1942, the specimen as determined by D.S. Correll (1943) states "first record south of New York" (Shetler & Orli 2000).

**Habitat**: Mixed deciduous and pine woods (Weakley 2015).

**Distr**. PD\* (Montgomery\*).

Gratiola ramosa Walter

Branched Hedge-hyssop

G4G5

X SH

Plantaginaceae (Plantain Family)

Cons/Econote: A species of wet pine savannas to our south and historically occurring in Maryland at the northern range limits (Pennell 1935). Collected by William Canby from "near Salisbury" ~1890. This location is a recurring theme in the historical flora of Maryland. **Habitat**: The area around Salisbury historically has comprised a vast area of inland sand dunes and stream-head, peaty fens dotted with large depressions (these visible on high resolution, false color aerial images). These depressions may have been nontidal Atlantic White Cedar (*Chaemacyparis thyoides*) swamps.

**Distr**. CP\* (Wicomico\*).

Gratiola viscidula Pennell

Short's Hedge-hyssop

G4G5

S1E

Plantaginaceae (Plantain Family)

**Cons/Econote**: Extant in Maryland at the northern range limits in two small and isolated populations.

**Habitat**: Pond shores in peaty soils.

**Distr**. CP (Prince George's, St. Mary's).

Gymnocarpium dryopteris (Linnaeus) Newman

Northern Oak Fern

G5

S1

Ε

Cystopteridaceae (Brittle Fern Family)

**Cons/Econote**: Circumboreal, occurring in Maryland near the southeastern range limits and endangered by habitat loss.

State State Federal Global Scientific Name Common Name Rank Status Status Rank

**Habitat**: Cool mesic ravines under northern hardwoods.

Distr. AP, RV (Frederick, Garrett).

Gymnocladus dioicus (Linnaeus) K. Koch

Kentucky Coffeetree

G5

**S**1

Fabaceae (Legume Family)

Cons/Econote: According to NHP records the only presumably native population in the State occurs in Washington County. Brown & Brown (1972) state that the species is native along the Savage River in Garrett County. Naturalized in the vicinity of Monocacy National Battlefield in Frederick County and otherwise widely planted and introduced elsewhere.

**Habitat**: Rich bottomland forests.

**Distr**. AP, CP<sup>I</sup>, PD<sup>I</sup>, RV (Anne Arundel<sup>I</sup>, Baltimore<sup>I</sup>, Cecil<sup>I</sup>, Frederick<sup>I</sup>, Garrett, Washington; introduced distribution incomplete).

Gymnopogon brevifolius Trinius

**Shortleaf Beardgrass** 

G5

**S**1

Е

Poaceae (Grass Family)

Cons/Econote: Occurring in Maryland near the northern range limits and restricted to pine barren-like remnant communities.

**Habitat**: Xeric inland dunes, maritime woodlands (Assateague Island), sandy roadsides.

**Distr**. CP (Calvert, Wicomico\*, Worcester).

Flw/Fr: late Jul-mid Sept (Oct).

Harperella nodosa Rose

Harperella

G2

**S**1

Ε

LE

Apiaceae (Carrot Family)

Syn: Ptilimnium nodosum (Rose) Mathias

**Taxnote**: Feist et al. (2012) resurrected the genus *Harperella* from within *Ptilimnium* based on an analysis of molecular markers and morphology. Inclusive of *H. vivipara* (Rose) and *H. fluviatilis* (Rose) for which Feist et al. found only marginal taxonomic evidence.

Cons/Econote: Endangered via landscape-level changes in stream flows and rangewide habitat loss; restricted to two streams in Maryland. Smith et al. (2015) provide a discussion of population genetic structure of MD and WV populations.

Habitat: Riverside bedrock scour bars.

Distr. RV (Allegany, Washington).

Flw: Aug-Sept; Fr: Sept- Nov.

Hasteola suaveolens (Linnaeus) Pojarkova

see Senecio suaveolens (Linnaeus) Elliott

Hierochloe odorata (Linnaeus) Palisot de Beauvois

see Anthoxanthum hirtum (Schrank) Y. Schouten & Veldkamp

Helianthemum bicknelii Fernald

see Crocanthemum bicknellii (Fernald) Barnhart

#### State State Federal Global Common Name Rank Rank Status Status Scientific Name Stiff-hair Sunflower G5 Helianthus hirsutus Rafinesque **S**1

Asteraceae (Aster Family)

**Cons/Econote**: Documented by a few old collections, the species had not been confirmed present in Maryland for more than 40 years. Rediscovered by the Service in 2014. Some previous reports were based upon confusion with the abundant and widespread *H. divaricatus*. There have been some recent reports from woodlands near Harper's Ferry. The source of the Brown & Brown (1984) record for Prince George's County—a conspicuous outlier—has not been determined. Flowering somewhat later than *H. divaricatus*.

**Habitat**: Dry woodlands and shale slopes.

**Distr**. RV (Allegany, Frederick\*).

Flw: late Aug-mid Sept; Fr: late Sept-Nov.

## Helianthus laevigatus Torrey & A. Gray

Smooth Sunflower

G4

**S**1 Ε

Asteraceae (Aster Family)

Shale Barren Sunflower

Cons/Econote: This species occurs locally in the central Appalachians and is restricted to shale barrens in our area. Maryland plants have not been seen since the date of first collection (1984).

**Habitat**: Shale barren woodland.

Distr. RV (Allegany).

Flw: early Sept; Fr: Sept-Oct.

#### Helianthus occidentalis Riddell

McDowell's Sunflower

G5T5

S1

T

Asteraceae (Aster Family)

Syn: H. dowellianus M.A. Curtis

H. occidentalis Riddell var. dowellianus (M.A. Curtis) Torrey & A. Gray

**Taxnote**: Maryland plants are ssp. *occidentalis*.

**Cons/Econote**: Restricted to a narrow zone of islands and shorelines along the Potomac Gorge.

**Habitat**: Scour bar and bedrock outcrops and rocky bluffs above the river.

**Distr**. PD (Montgomery). Flw: Sept; Fr: Sept-Oct.

## Helonias bullata Linnaeus

Swamp Pink

G3

**S**2

LT

Ε

Heloniadaceae (Swamp-pink Family)

Cons/Econote: Endangered by habitat loss, eutrophication and sedimentation of wetland habitats. Dramatic decline in Anne Arundel County populations since the late 1980s at all stations and little evidence of reproduction by seed. Mining threatens the remaining populations in Cecil County. The Dorchester County station is often suspected as an introduction, being suspiciously distant from all other stations. However, the floristic assemblage is similar to other sites.

**Habitat**: Acidic seepage swamps along the Fall Line over deep gravel deposits.

**Distr**. CP (Anne Arundel, Cecil, Dorchester).

Flw: Apr-May; Fr: (rarely) May-Jun.

#### Hemianthus micranthemoides Nuttall

Nuttall's Micranthemum GH SH X

Linderniaceae (False pimpernel Family)

Syn: Micranthemum micranthemoides (Nuttall) Wettstein

**Cons/Econote**: Perhaps extinct. Despite the putative availability of habitat this species has not been relocated at its historical stations in Maryland nor elsewhere (see NatureServe 2015).

**Habitat**: Rocky, gravelly or muddy tidal shores of Bay tributaries.

**Distr**. CP\* (Caroline\*, Dorchester\*, Prince George's\*, Wicomico\*, Worcester\*).

#### Heracleum maximum W. Bartram

Cow-parsnip

G5

**S**3

Apiaceae (Carrot Family)

**Cons/Econote**: Populations are generally small but the plant, due to its large stature (1.5-3 meters) is conspicuous, supporting casual observations of a general decline in abundance. The species appears competitive in its riparian habitat but may be displaced by Japanese knotweed (*Reynoutria japonica*).

Habitat: Rich floodplain forests.

Distr. AP, PD, RV (Allegany, Baltimore, Cecil, Frederick, Garrett, Harford, Howard, Montgomery, Washington).

Flw: mid May-Jun: Fr: Jul-Sept.

# Heuchera pubescens Pursh

Downy Alumroot

G4?

**S**3

Saxifragaceae (Saxifrage Family)

**Taxnote**: Inclusive of var. *brachyandra*, which may be better treated as a distinct species, *H. alba* Rydberg. Further study of Maryland plants is warranted.

**Habitat**: Rocky woods and outcrops over limestone and calcareous shale.

Distr. AP, PD, RV (Allegany, Garrett, Montgomery, Washington).

#### Hexalectris spicata (Walter) Barnhart!

Crested Coralroot

G5T4T5

S1 X(PE)

Orchidaceae (Orchid Family)

**Taxnote**: Our plants are the wide-ranging southeastern var. *spicata*.

**Cons/Econote**: At one time a single (historical) station, last collected in 1955. Rediscovered (and new to the Eastern Shore) by William McAvoy in 2017. Maryland is the northernmost extent of this species' geographic range. The Service has forwarded a proposal to list this species as endangered.

Habitat: Native American shell (oyster) midden, shell marl.

**Distr**. CP (Anne Arundel\*, Kent).

Flw: mid to late Jul; Fr: ?

State State Federal Global Scientific Name Common Name Rank Status Status Rank Hexastylis virginica (Linnaeus) Small Virginia Heartleaf **S**1 G4 E Aristolochiaceae (Birthwort Family) Cons/Econote: Highly localized and occurring in Maryland at the northern range limit of the species. **Habitat**: Mesic upland forests and north slopes of deep ravines. **Distr**. CP (Charles). Flw: Apr-May; Fr: May-Jun. Hibiscus laevis Allioni Halberd-leaf Rosemallow G5 **S**3 Malvaceae (Mallow Family) Cons/Econote: Occurring along the Susquehanna and Potomac Rivers. **Habitat**: Riverine scour and depositional bars and shorelines. Distr. CP, PD, RV (Cecil, Charles, Frederick, Harford, Montgomery, Prince George's, Washington). **Flw**: late July-early Aug; **Fr**: late Aug-Nov. Homalosorus pycnocarpos (Sprengel) Pichi-Sermolli **S**2 T Glade Fern G5 Diplaziopsidaceae (Glade Fern Family) **Syn**: Athyrium pycnocarpon Sprengel Diplazium pycnocarpon (Sprengel) M. Broun **Cons/Econote**: Threatened by encroaching invasive species and heavy browse by white-tailed deer. The Coastal and Piedmont stations are highly fragmented and persist as small populations in remnant pockets of rich forest. **Habitat**: Rich, mesic ravines (shell-marl), steep rocky "seepy" slopes in mesic mixed forests, often over mafic substrates. Distr. AP, CP, PD, RV (Allegany, Anne Arundel, Baltimore\*, Calvert, Charles, Garrett, Harford, Howard, Montgomery, Prince George's, Washington). Honckenya peploides (Linnaeus) Ehrhart Sea Chickweed G5T4 S1E Caryophyllaceae (Pink Family) Seabeach Sandwort Taxnote: Maryland plants are ssp. robusta (Fernald) Hultén Cons/Econote: Circumboreal, south to Virginia (historically) and restricted to saline habitats on the barrier island (Assateague). **Habitat**: Coastal beaches and overwash flats. **Distr**. CP (Worcester).

Hottonia inflata Elliott

Featherfoil

G4

S1 E

Primulaceae (Primrose Family)

**Cons/Econote**: Endangered by woody succession of pond habitat. Possibly dispersed by waterfowl, not all known stations are currently occupied and may be ephemeral or may not have survived the extended droughts of 2004-2008.

Habitat: Delmarva Bays, bottomland hardwood swamps.

State State Federal Global Scientific Name Common Name Rank Status Status Rank **Distr.** CP. PD (Caroline, Charles, Kent, Montgomery, Oueen Anne's, Talbot).

Flw: May; Fr: Jun.

Houstonia serpyllifolia Michaux

Michaux's Bluet

G4?

**S**3

Rubiaceae (Madder Family)

Syn: Hedyotis michauxii Fosberg

**Cons/Econote**: A southern and central Appalachian endemic.

**Habitat**: Locally abundant along rivers in Garrett County; in shade to partial shade in damp soil, often among or growing on rocks.

Distr. AP (Garrett).

Flw: mid May-Jun; Fr: Aug.

Houstonia tenuifolia Nuttall

Slender-leaved Bluets

**GNR** 

S1

Rubiaceae (Madder Family)

Syn: Houstonia longifolia var. tenuifolia (Nuttall) Wood

Hedyotis nuttalliana Fosberg

**Taxnote**: The thin-leaved morphological extreme of the more common *H. longifolia* according to Terrell (1959) and not often treated as a distinct species.

**Habitat**: Dry woodlands, bedrock scour terraces and outcrops, limestone talus slopes and shale scree slopes.

**Distr**. PD, RV (Montgomery, Washington).

Hudsonia ericoides Linnaeus Cistaceae (Rockrose Family)

Golden Heather

G4

S1

Ε

Cons/Econote: Added to the Maryland flora by Sipple (2002); the species occurs in a pine barrens-like remnant.

**Habitat**: Sandy soils under a large powerline rights-of-way.

**Distr**. CP (Anne Arundel).

Huperzia porophila (Lloyd & Underwood) Holub

**Rock Clubmoss** 

G4

SX

Lycopodiaceae (Clubmoss Family)

Syn: Lycopodium porophilum Lloyd & Underwood

Cons/Econote: Historically known from a single station (Youghiogheny River Gorge) now extirpated. Last collected by D. D. Boone in 1982.

**Habitat**: Wet outcrop at waterfall.

**Distr**. AP\* (Garrett\*).

Hybanthus concolor (T.F. Forster) Sprengel

Green Violet

G5

**S**3

Violaceae (Violet Family)

State State Federal Global Scientific Name Common Name Rank Rank Status Status

Cons/Econote: Locally abundant at some sites but generally restricted to highly calcareous soils.

**Habitat**: Dry to mesic limestone woodlands and outcrops.

Distr. PD, RV (Allegany, Cecil, Frederick, Harford, Montgomery, Washington).

Flw: May; Fr: Jun-Aug.

#### Hydrastis canadensis Linnaeus

Golden-seal

G3

S2

T

Hydrastidaceae (Golden-seal Family)

Cons/Econote: Threatened by habitat loss throughout the species' range. While Maryland populations do not appear to have suffered from collecting pressures for the medicinal plant trade, the regional declines of this species have created concern among natural resource agencies—this recently highlighted by the addition of Golden-seal to the IUCN Red List as a Vulnerable plant species (IUCN 2017). Golden-seal's rhizomes have high concentrations of medicinally-active alkaloids (berberine, hydrastine and canadine used for treating colds and upper respiratory infections). Unlike ginseng, the market does not distinguish between wild and cultivated goldenseal, additionally leaves and stems have commercial value when harvested while still green. Maryland populations are likely to suffer from illegal harvesting in the future when more abundant sources become tapped. Christensen & Gorchov (2010) provide a valuable discussion of the population dynamics of the species.

Habitat: Rich, mesic forests over mafic substrates (limestone, marble) or rich alluvium.

**Distr**. AP, PD, RV (Baltimore\*, Cecil, Frederick, Garrett, Harford, Howard, Montgomery, Washington).

Flw: May; Fr: Jul-Sept.

#### Hydrophyllum macrophyllum Nuttall

Large-leaf Waterleaf

G5

**S**2

T

Boraginaceae (Borage Family)

**Cons/Econote**: Threatened by habitat loss over the long term and competition/displacement by invasive species in the near term.

**Habitat**: Basic mesic forests and rich floodplain forests, chiefly over limestone.

Distr. RV (Washington). Flw: late May; Fr: Jun-Jul.

#### Hylodesmum pauciflorum (Nuttall) H. Ohashi & R.R. Mill

Few-flower Tick-trefoil

G5

S2 Ε

Fabaceae (Legume Family)

Syn: Desmodium pauciflorum (Nuttall) A.P. de Candolle

**Taxnote**: Three species of tick-trefoil, *Desmodium nudiflorum*, *D. glutinosum* and *D. pauciflorum* are distinct from North American Desmodium and have been segregated as Hylodesmum (Ohashi & Mill 2002).

**Cons/Econote**: Endangered by habitat loss and displacement by invasive species.

Habitat: Mesic floodplain forests over rich alluvium.

**Distr.** CP (Anne Arundel, Cecil\*, Calvert, Howard, Kent, Prince George's, St. Mary's\*, Talbot\*).

Flw: Aug; Fr: Aug-Oct.

# Scientific Name Common Name Common Name Rank Rank State State Federal Rank Hypericum adpressum Rafinesque ex Barton Creeping St. John's-wort G3 S1 E

Hypericaceae (St. John's-Wort Family)

**Cons/Econote**: Endangered by habitat loss and alteration of groundwater hydrology. Maryland populations have poor protection status, i.e., many stations do not occur on protected lands where monitoring may take place when needed. Historically disjunct on the Appalachian Plateau (Mt. Lake Park), the site of a calcareous fen (now extirpated).

Habitat: Delmarva Bays and other seasonally-flooded wetlands.

**Distr**. AP\*, CP (Caroline, Dorchester, Garrett\*, Queen Anne's, Wicomico, Somerset).

Flw: mid-late Jul; Fr: Aug-Oct.

# Hypericum denticulatum Walter

Coppery St. John's-wort G5 S2

Hypericaceae (St. John's-Wort Family)

**Taxnote**: Not including *H. denticulatum* var. *acutifolium* (*H. virgatum*, see below).

**Cons/Econote**: Threatened by habitat loss. The species persists in remnant populations along ditches but these are not likely viable over the long term. Several large populations occur under transmission rights-of-way that are susceptible to herbicide damage and/or detrimental mowing patterns (during reproductive phase).

Habitat: Delmarva Bays, wet pine flatwoods, ditches, roadsides.

Distr. CP (Caroline, Dorchester, Wicomico, Worcester).

Flw: mid-late Aug; Fr: Sept-Oct.

#### Hypericum drummondii (Greville & Hooker) Torrey & A. Gray

Drummond's St. John's-wort G5 SH X

Hypericaceae (St. John's-Wort Family)

**Cons/Econote**: Last collected 1944 and documented by a single collection.

Habitat: Dry woodlands, woodland borders, fields (Weakley 2015).

Distr. CP\* (Talbot\*).

# Hypericum ellipticum Hooker

Pale St. John's-wort G5 SU

Hypericaceae (St. John's-Wort Family)

**Cons/Econote**: The southern range of this widespread northern and midwestern species is exceptionally spotty. The species has been reported from opposite ends of the state and from very different habitats. The Service suspects that the species is present in w. Maryland but currently there is not enough information to establish a confident rank and status.

Habitat: Mountain peatlands; streambanks.

Distr. AP?, PD? (Cecil?, Garrett?).

# Hypericum gymnanthum Engelmann & A. Gray

Clasping-leaf St. John's-wort

S3

G5

T

Hypericaceae (St. John's-Wort Family)

**Cons/Econote**: Widely overlooked; population size and vigor is closely associated with disturbance intervals in wet meadows and pinelands.

**Habitat**: A component of wet pine flatwoods, but also persisting in wet sandy soils under powerlines, along roadsides, and logging roads.

Distr. CP (Caroline, Charles, Dorchester, Kent, Prince George's, St. Mary's\*, Somerset, Wicomico, Worcester).

#### Hypericum virgatum Lamarck

Sharpleaf St. John's-wort G4? SH

Hypericaceae (St. John's-Wort Family)

Syn: H. denticulatum Walter var. acutifolium (Elliott) Blake

H. denticulatum ssp. acutifolium (Elliott) N. Robson

H. acutifolium Elliott

**Cons/Econote**: Webb (1980) cited a single Maryland specimen (*H. denticulatum* var. *acutifolium*, collected by Wherry) in his treatment and this was the first indication that this taxon occurred, at least historically, in Maryland. There are three historical records for this species in Maryland: one from Baltimore County (presumably serpentine meadows) and two from Prince George's County: near Laurel (Wherry 1932) and at Patuxent Wildlife Research Center (1938); these presumably pine barrens-like communities. Allison (2011) presents an analysis of the species in the *H. denticulatum* group.

Habitat: Oak and pine barrens; open meadows over serpentine.

**Distr**. CP\*, PD\* (Baltimore\*, Prince George's\*).

Ilex decidua Walter

Deciduous Holly

G5

**S**2

Aquifoliaceae (Holly Family)

**Cons/Econote**: Occurring in a variety of rich alluvial habitats, this species may be locally frequent but is rare to infrequent at most stations.

**Habitat**: Bottomland hardwoods, hardwood swamps, rich alluvial terrace forests and woodlands.

Distr. CP, PD (Anne Arundel, Caroline, Charles, Montgomery, Prince George's, Queen Anne's, St. Mary's).

Flw: mid Apr; Fr: Aug-Nov.

Ilex mucronata (Linnaeus) M. Powell, V. Savolainen, & S. Andrews Mountain Holly

G5

**S**3

Aquifoliaceae (Holly Family)

Syn: Nemopanthus mucronata (Linnaeus) Trelease

Cons/Econote: A characteristic shrub of mountain peatlands in Garrett County; restricted to that physiographic province.

Habitat: Montane peatlands, sedge meadows, glades.

Distr. AP (Allegany, Garrett).

Flw: May; Fr: Jun-Nov.

Iresine rhizomatosa Standley

Eastern Bloodleaf

G5

S1 E

Amaranthaceae (Amaranthus Family)

State State Federal Global Common Name Rank Rank Status Status Scientific Name

Cons/Econote: A plant restricted to two small populations in the Potomac Gorge and occurring in Maryland at the northern range limits.

**Habitat**: Deep pockets of alluvial silt and sand along flood channels and river banks.

**Distr**. PD (Montgomery). Flw: Aug-Sept; Fr: Sept-Dec.

**Dwarf Crested Iris** G5 **S**1 Ε Iris cristata Aiton

Iridaceae (Iris Family)

Cons/Econote: Occurring as scattered, generally small populations at the northern range limits. Reproduction is sporadic and may be additionally impacted by browsing white-tailed deer.

**Habitat**: Thin, dry acid soil of upland forests; floodplain terraces in filtered to partial shade.

**Distr.** PD, RV (Allegany, Montgomery, Washington).

Flw: early May; Fr: Jun-Jul.

#### Iris prismatica Pursh ex Ker-Gawler

Slender Blueflag

G4G5

S2

Ε

Iridaceae (Iris Family)

Cons/Econote: Endangered by habitat loss including direct losses due to herbicide use (powerlines).

**Habitat**: A variety of groundwater-driven depressional wetlands including Delmarva Bays, floodplain pools, and upland depression swamps; low areas in pine flatwoods, powerline meadows.

**Distr**. CP, PD (Baltimore, Caroline, Cecil, Dorchester, Harford, Kent\*, Prince George's\*, St. Mary's, Wicomico, Worcester).

Flw: Apr-May; Fr: late Jul-Sept.

Iris verna Linnaeus **Dwarf Iris** G5T3T5 S1Ε

Iridaceae (Iris Family)

**Taxnote**: Maryland plants are var. verna.

Cons/Econote: This small iris of fire-prone sandhills and woodlands in the southeast is, in Maryland, almost entirely restricted to artificially maintained habitats under powerlines and along roadsides and ditches. Persistence at these sites is precarious.

**Habitat**: Rights-of-way under powerlines, roadsides and ditches in dry, sandy soils.

**Distr**. CP (Anne Arundel, Charles, Prince George's\*, Wicomico, Worcester).

Flw: late Apr-early Jun; Fr: Jul.

# Iris virginica Linnaeus

Virginia Blueflag

G5

**S**3

Iridaceae (Iris Family)

Taxnote: Maryland plants are var. shrevei (Small) E. Anderson

**Habitat**: River margins, flood channels, pools and pond margins.

**Distr**. CP\*, PD, RV (Allegany, Calvert\*, Charles, Frederick, Kent\*, Montgomery, Prince George's\*, Queen Anne's\*, Washington).

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Isoëtes engelmannii A. Braun Engelmann's Quillwort G5 S3

Isoëtaceae (Quillwort Family)

**Taxnote**: A diploid species, Maryland plants are presumably the southern genotype (see Hoot et al. 2004).

Cons/Econote: The most commonly occurring quillwort in our region; however, many Maryland records are now historical and the identity of many specimens need confirmation. The State rank is currently under review and the Service requests additional data.

**Habitat**: Intermittent stream beds with gravel bottoms, floodplain swales and oxbow sloughs (McAvoy 2007), ponds.

**Distr**. CP, PD, RV (Allegany, Caroline, Cecil, Dorchester, Frederick, Kent, Montgomery\*, Prince George's, Talbot, Worcester\*).

#### Isoëtes riparia Engelmann ex A. Braun

Riverbank Quillwort

G5?

SU

Isoëtaceae (Quillwort Family)

**Taxnote**: Hoot et al. (2004) identified Maryland accessions as of allopolyploid origin (*I. engelmannii* x *I. echinospora*). The taxonomic difficulties in the genus are driven by conserved morphology with substantial levels of allopolyploid speciation.

**Cons/Econote**: The conservation status and distribution of this species needs substantial review.

**Habitat**: Exposed intertidal shores of freshwater rivers and creeks; on gravel, sand and mud substrates (McAvoy 2007).

**Distr**. CP (Caroline, Cecil, Dorchester, Harford\*, Kent, Prince George's\*, Queen Anne's\*, Wicomico, Worcester).

#### Isotrema macrophyllum (Lamarck) C.F. Reed

Pipevine, Dutchman's Pipe G5

**S**2

T

Aristolochiaceae (Birthwort Family)

Syn: Aristolochia macrophylla Lamarck

**Cons/Econote**: Restricted to linear riparian habitats. **Habitat**: Montane alluvial forest and cove forests.

**Distr**. AP, RV\* (Allegany\*, Garrett). Flw: May-Jun; Fr: late Jun-Sept.

#### Isotria medeoloides (Pursh) Rafinesque

Small Whorled Pogonia

G2

SH

X

LT

Orchidaceae (Orchid Family) Syn: Pogonia affinis Austin

Cons/Econote: Presumed extirpated. Populations of this widespread (in North America) but extremely localized species are largest in the previously glaciated northeastern range. The remaining southern populations are highly differentiated and genetically depauperate (see Stone et al. 2012 for a thorough discussion). Historically known from Montgomery County and documented by a few collections 1928-1930 (Reed 1964, and Wright 1992 for historical details). The area around Chevy Chase, now heavily urbanized, was apparently wellknown to botanists during the 1920s and 1930s and so many locations were found in such a small area that Edgar Wherry (1885-1982), in a letter to Jenny Jones (28 July 1929), opined that "evidently it is not rare at all, but has been overlooked."

Habitat: Mesic hardwood forests.

**Distr**. PD\* (Montgomery\*). Flw: early-mid May; Fr: Jul.

State State Federal Global Scientific Name Rank Rank Status Status Common Name G4 Juglans cinerea Linnaeus Butternut **S2S3** 

Juglandaceae (Walnut Family)

Cons/Econote: Butternut is experiencing a rapid rangewide decline due to the spread of butternut canker disease (NatureServe 2015).

Habitat: Rich, mesic forests.

**Distr**. AP, CP, PD, RV (Allegany, Cecil, Charles, Dorchester<sup>I</sup>, Frederick, Garrett, Harford, Howard, Montgomery, Washington).

Juncus articulatus Linnaeus

Jointed Rush

G5

**S**1

Juncaceae (Rush Family)

Syn: Juncus articulatus Linnaeus var. obtusatus Engelmann

Cons/Econote: Known from only two counties and three collections in Maryland. Though seemingly an odd distribution this mostly montane species is known from coastal New Jersey and North Carolina. Easily overlooked and similar to *J. acuminatus*.

**Habitat**: Disturbed open seasonally wet sands, ditches, interdunal swales.

**Distr**. AP, CP (Garrett, Worcester).

Juncus balticus Willdenow

Baltic Rush

G5T5

SH

X

Juncaceae (Rush Family)

Syn: Juncus arcticus Willdenow var. balticus (Willdenow) Trautvetter

Juncus balticus Willdenow ssp. littoralis (Engelmann) Snogerup

**Taxnote**: Cosmopolitan species with varying names depending on the manual used. Maryland plants are var. *littoralis* Engelmann.

Cons/Econote: Known from a single Baltars collection from 1966 (4497 Cylburn).

Habitat: "Border of ditch along railroad ca 3/4 mile southeast of Abingdon."

**Distr**. CP\* (Harford\*).

Juncus brachycephalus (Engelmann) Buchenau

Small-head Rush

G5

SHX

Juncaceae (Rush Family)

Cons/Econote: One known collection "sandy shore of artificial lake (Dam on Herrington Creek), Herrington Manor, 4.25 mi northwest of Oakland" (Hermann 11375 US).

**Habitat**: Calcareous (?) seepage wetlands.

**Distr**. AP\* (Garrett\*).

Juncus brevicaudatus (Engelmann) Fernald

Narrow-panicle Rush

G5

S2

Juncaceae (Rush Family)

**Cons/Econote**: Often confused with the more widespread and similar *J. subcaudatus*.

**Habitat**: Seepage wetlands of higher elevations, mountain peatlands.

Distr. AP (Garrett).

# Scientific NameCommon NameRankRankStateFederalJuncus caesariensis CovilleNew Jersey RushG2G3S1E

Juncaceae (Rush Family)

**Taxnote**: Similar to the widespread *J. canadensis*, this species differs in seed morphology and obvious scabrid gray-green to blue-green culms and leaves.

**Cons/Econote**: Known in Maryland from a single extant location. This species reaches its greatest abundance in New Jersey.

Habitat: Open canopied seepage wetlands, powerline swales.

**Distr**. CP (Anne Arundel\*, Charles).

Flw/Fr: Aug-Oct.

# Juncus elliottii Chapman

Elliott's Rush

G4G5

**S**1

Juncaceae (Rush Family)

**Taxnote**: Similar to and often confused with the common and widespread *J. acuminatus*. The darker capsules and shorter tepals readily separate *J. elliottii*. The tuberous rhizomes often mentioned in keys as diagnostic are unreliable in our range as they are very rarely present in *J. acuminatus* or can be absent in *J. elliottii*.

Cons/Econote: Known from two locations. This species could be easily overlooked.

**Habitat**: Open-canopied seasonally wet peaty sands, powerline swales.

Distr. CP (St. Mary's, Wicomico).

#### Juncus longii Fernald

Long's Rush

G30

**S**1

Ε

Juncaceae (Rush Family)

**Taxnote**: Often lumped with the more widespread *Juncus marginatus* or *Juncus biflorus*, Knapp & Naczi (2008) show this to be a distinct species.

**Cons/Econote**: Though the global rank at NatureServe is G3Q, it is more appropriately G4/G5. The Montgomery County station is associated with other plants found predominantly on the Coastal Plain.

Habitat: Open-canopied seepage wetlands, roadside seeps, powerlines.

**Distr**. CP (Anne Arundel, Charles, Montgomery, Prince George's, Worcester).

#### Juncus megacephalus M.A. Curtis

Big-head Rush

G4G5

S1?

Juncaceae (Rush Family)

**Cons/Econote**: This species is a recent addition to the Maryland Flora (Knapp et al. 2011). Known from nearby Accomac Co., VA, apparently only recently arrived in Maryland.

Habitat: Interdunal swales.

**Distr**. CP (Worcester).

# Juncus militaris Bigelow

**Bayonet Rush** 

G5

SH X

Juncaceae (Rush Family)

Cons/Econote: Though known with some frequency in adjacent Sussex Co., Delaware, there is a single historic specimen for this plant in Maryland collected from "near Salisbury" in 1864.

Habitat: Millponds, shallow streams.

**Distr**. CP (Wicomico\*).

## Juncus pelocarpus E. Meyer

Brown-fruit Rush

G5

S1E

Juncaceae (Rush Family)

Syn: Juncus pelocarpus E. Meyer var. crassicaudex Engelmann

Juncus abortivus Chapman

**Taxnote**: Southern plants with a more erect habit and thicker rhizomes are sometimes separated as *J. abortivus*. These characters appear clinal.

Cons/Econote: Flowers are often aborted. More common on the Western Shore than the Eastern Shore, this species can be found in great abundance in good habitat.

**Habitat**: Millpond basins, sandpits, acidic seepage wetlands.

**Distr**. CP (Anne Arundel, Dorchester, Wicomico).

#### Juncus torreyi Coville

Torrey's Rush

G5

S1

Ε

Juncaceae (Rush Family)

Cons/Econote: Given the disturbance loving nature of this species it is plausible this species is under-reported and overlooked. However, when compared to many other cryptic *Juncus* species, this species is fairly conspicuous.

Habitat: Open wetlands, ditches, roadsides.

**Distr**. CP, PD (Baltimore, Howard, Prince George's).

# Juncus trifidus Linnaeus

Highland Rush

G5

S1

Ε

Juncaceae (Rush Family)

Cons/Econote: Known from a single location last observed in 1980 (Riefner & Hill 1983). Searched for many times since its discovery but the Service has failed to relocate the plants and the population is presumed extirpated. The species is rare throughout the southern Appalachian and Mid-Atlantic portion of its range but common in northern New England and adjacent Canada.

**Habitat**: Scattered in exposed cliff crevices of Tuscarora sandstone at upper and mid-elevations. State status is under review.

Distr. RV (Allegany).

#### Juniperus communis Linnaeus

**Dwarf Juniper** 

G5

SH

X

Cupressaceae (Cypress Family)

**Taxnote**: Maryland plants are var. *depressa* Pursh.

Cons/Econote: Collected from hills along the Susquehanna River and from serpentine outcrops by Reed (1986). Historical stations have not been relocated.

Global State State Federal Scientific Name Common Name Rank Rank Status Status **Habitat**: Thin soils over serpentine outcrops. **Distr**. PD\* (Baltimore\*, Cecil\*). Kalmia angustifolia Linnaeus Sheep Laurel **S3S4** G5 Ericaceae (Heath Family) **Habitat**: Inland sand dune and ridge forest and woodlands; sandy seeps and clearings. **Distr**. CP (Anne Arundel, Caroline, Cecil, Charles, Howard, Prince George's, Wicomico, Worcester). Flw: mid May-Jun; Fr: Aug-Oct. Krigia dandelion (Linnaeus) Nuttall **S2S3** Potato Dwarf-dandelion G5 Asteraceae (Aster Family) Cons/Econote: Maryland populations are the northernmost in the species' range that are known to be extant. Most of the remaining populations occur in a highly urbanized landscape and are isolated and severely fragmented. **Habitat**: Exposed mineral soils derived from nutrient-rich (ultramafic) substrates and glauconitic sands. **Distr.** CP, PD, RV\* (Anne Arundel\*, Calvert, Carroll, Charles, Frederick\*, Howard, Montgomery, Prince George's, St. Mary's). Flw: early-late May; Fr: late May-June. **S**1 Lachnanthes caroliniana (Lamarck) Dandy Red Root G4E Haemodoraceae (Bloodwort Family) Carolina Redroot **Cons/Econote**: Known from a single station. Habitat: Delmarva Bay. **Distr**. CP (Dorchester). Flw: late Jun-Jul; Fr: Jul-Sept. Lactuca hirsuta Muhlenberg ex Nuttall Hairy Lettuce G5 SHX Asteraceae (Aster Family) **Taxnote**: Inclusive of two potentially occurring subtaxa: var. *hirsuta* and var. *sanguinea* (Bigelow) Fernald. Cons/Econote: Represented by a few pre-to-early 1900s collections mostly from the vicinity of Great Falls. The weedy nature of the genus and similar-looking species may have contributed to overlooking this species in the field. Habitat: Forest edges. **Distr.** PD\* (Baltimore\*, Montgomery\*). Larix laricina (Du Roi) K. Koch S1American Larch G5 E

Pinaceae (Pine Family)

**Cons/Econote**: Occurring at its southern range limits in relict boreal forests in MD and adjacent WV. This species is frequently planted and available as a commercial forestry tree. Our concern regards those relictual occurrences in Garrett County peatlands that have long been noted by botanists (e.g. Bell 1941).

**Habitat**: Remnant boreal subarctic swamps.

Distr. AP (Garrett).

# Lathyrus palustris Linnaeus

Vetchling Peavine

G5

S1 E

Fabaceae (Legume Family)

**Cons/Econote**: A circumboreal species near its southern range limits in Maryland at a single extant station.

**Habitat**: Freshwater tidal marsh on hummocks of *Carex stricta*.

**Distr**. CP, PD\* (Cecil, Montgomery\*, Prince George's\*).

Flw: mid Jun-Jul; Fr: Aug.

# Lechea maritima Leggett ex Britton, Sterns, & Poggenburg

Virginian Beach Pinweed

G5T3O

**S**3

Cistaceae (Rockrose Family)

Taxnote: Maryland plants are var. virginica Hodgdon; var. maritima is present in Delaware and potentially occurs in Maryland.

Cons/Econote: A regional coastal endemic (Sorrie & Weakley 2007b); locally frequent on the barrier island (Assateague).

**Habitat**: Xeric coastal dunes, coastal scrub woodlands with beach-heather (*Hudsonia tomentosa*).

Distr. CP (Anne Arundel, Calvert\*, St. Mary's\*, Worcester).

#### Lechea tenuifolia Michaux

Slender Pinweed

G5

SH X

Cistaceae (Rockrose Family)

Cons/Econote: Reported for stations in s. Maryland from about 1901-1960.

Habitat: Sandy woodlands/glades in dry soil.

**Distr**. CP\* (Anne Arundel\*, Charles\*, Prince George's\*).

#### Leersia hexandra Swartz

Club-head Cutgrass

G5

S1 E

Poaceae (Grass Family)

**Cons/Econote**: Endangered by habitat loss over the long term and by woody succession of bay habitat over the short term. Known from single population that is recovering after controlling tree encroachment into the open-pond habitat.

**Habitat**: Delmarva bay. **Distr**. CP (Worcester).

Flw/Fr: Sept.

#### Leersia lenticularis Michaux

Catchfly Cutgrass

G5

S1 E

Poaceae (Grass Family)

Cons/Econote: Endangered by habitat loss. A rare component of coastal swamp forests, chiefly along the Pocomoke River.

**Habitat**: Riverine floodplain swamps. **Distr**. CP (Dorchester, Worcester).

Flw/Fr: Aug.

Lemna trisulca Linnaeus

Star Duckweed

G5

S1 E

Lemnaceae (Duckweed Family)

**Cons/Econote**: Occurring in Maryland in a few scattered stations; this species' habitat is very restricted in comparison to its widespread and common congener *L. minor* Linnaeus. Inventory of this species is made difficult due to the habit of the plant to float just underneath the water surface (J. Hall, pers. comm).

Habitat: Ponds, canals, baymouth barrier wetlands (Sipple 1982).

Distr. CP, RV (Allegany, Calvert).

Lespedeza frutescens (Linnaeus) Elliott

Violet Lespedeza

G5

**S**3

Fabaceae (Legume Family)

Syn: L. violacea (Linnaeus) Persoon

Habitat: Dry, open woodland borders, occasionally rocky scour bars along large rivers.

**Distr**. RV (Allegany, Frederick, Washington).

Flw: mid Aug-early Sept; Fr: Sept-Nov.

Lespedeza stuevei Nuttall

Silky Lespedeza

G5

G3

**S**3

Fabaceae (Legume Family)

**Habitat**: Sand ridge woodlands, roadsides in dry sandy soils.

**Distr**. CP (Anne Arundel, Baltimore\*, Calvert, Caroline, Charles\*, Dorchester, Prince George's, Wicomico, Worcester).

Flw: mid Aug-mid Sept; Fr: Sept-Nov.

Liatris helleri T. C. Porter

Heller's Blazing Star

SH X

Asteraceae (Aster Family) **Syn**: *L. turgida* Gaiser

Shale-barren Blazing Star

Turgid Gayfeather

**Taxnote**: The species was long-known as *L. turgida* but now is included in a broadened concept of *L. helleri*.

Cons/Econote: Last collected in 1968 (by Eduard Baltars) from a single station at the northern range limit for the species.

**Habitat**: Shale barren. **Distr**. RV\* (Allegany\*).

Liatris spicata (Linnaeus) Willdenow

Prairie Blazing Star

G5

**S**1

Asteraceae (Aster Family)

**Taxnote**: Maryland plants are var. *spicata*; var. *resinosa* (Nuttall) Gaiser is to be expected.

Cons/Econote: Highly restricted and localized but frequent in habitat. Populations have been greatly reduced by heavy browse of whitetailed deer and fire exclusion.

**Habitat**: Serpentine grasslands.

**Distr**. PD (Baltimore).

Flw: late Aug-Sept; Fr: Sept-Oct.

#### Liatris squarrosa (Linnaeus) Michaux

Scaly Gayfeather

G5T5

Е **S**1

Asteraceae (Aster Family)

**Taxnote**: If varieties of this species are recognized, Maryland plants are var. *squarrosa*.

**Cons/Econote**: Endangered by habitat loss and absence/suppression of natural disturbances, such as fire, that creates canopy openings.

**Habitat**: Dry, sandy soil in open, sunny habitats.

**Distr**. CP (Charles). Flw: Aug; Fr: Sept-Oct.

#### Ligusticum canadense (Linnaeus) Britton

American Lovage

G4

SH X

Apiaceae (Carrot Family)

Cons/Econote: One of the many species collected at Mountain Lake Park by Lucy Braun in the early 1900s, the historical site of a mafic prairie or fen.

**Habitat**: Calcareous fen (apparently).

**Distr**. AP\* (Garrett\*).

#### Lilium philadelphicum Linnaeus

Wood Lily

G5

SH

X

Liliaceae (Lily Family)

Cons/Econote: Maryland records are based upon a smattering of old collections 1898-1947; last observed in 2000 (Redman 2002) and not relocated.

**Habitat**: Prairie-like meadows, woodlands.

**Distr**. AP\*, PD\*, RV\* (Allegany\*, Cecil\*, Garrett\*, Washington\*).

# Limnobium spongia (Bosc) L.C. Richard ex Steudel

American Frog's-bit

G4

**S**1 Ε

Hydrocharitaceae (Frog's-bit Family)

Cons/Econote: Occurring in Maryland (and Delaware) at its northern range limits and associated with rare nontidal wetland plant communities.

**Habitat**: Baymouth barrier wetlands (Sipple 1982), nontidal shrub swamps.

**Distr**. CP (Calvert, Cecil, Charles, Dorchester, Kent).

Flw: Jul; Fr: ?

#### State State Federal Global Scientific Name Rank Status Status Common Name Rank Limosella australis R. Brown Mudwort G4G5 S2 Ε

Plantaginaceae (Plantain Family)

Cons/Econote: One of many intertidal zone plants that are suspected of being under severe decline, presumably due to sea level rise but also by eutrophication and siltation of habitats along tributaries of the Chesapeake Bay. Presumed extirpated along the Gunpowder River, and under severe decline elsewhere. Several stations along the Upper Bay could not be relocated in 2017 (J. Harrison).

**Habitat**: Fresh to brackish intertidal shores along the upper Chesapeake Bay and tributaries.

**Distr**. CP (Baltimore/Harford\*, Cecil, Harford, Kent).

#### Linum intercursum Bicknell

Sandplain Flax

G4

S2

T

Linaceae (Flax Family)

Cons/Econote: Threatened by habitat loss and degradation due to development of its upland habitat, and by natural succession due to suppression of natural disturbances such as fire that creates canopy openings.

**Habitat**: Dry to seasonally wet clearings, powerlines, roadsides, usually in exposed sandy soils.

Distr. CP, PD\* (Baltimore, Cecil\*, Charles, Kent, Prince George's, Queen Anne's\*, St. Mary's, Somerset, Talbot\*, Wicomico, Worcester).

Flw: late Jul-Aug; Fr: Aug- mid Sept.

#### Linum sulcatum Riddell

**Grooved Yellow Flax** 

G5

**S**1 Ε

Linaceae (Flax Family)

Cons/Econote: Restricted to ultramafic barrens and a single protected site. Threatened by fire exclusion and heavy deer browse.

Habitat: Exposed beds of serpentine in the barrens.

Distr. PD (Baltimore, Harford).

#### Liparis liliifolia (Linnaeus) L.C. Richard ex Ker-Gawler

Large Twayblade

G5

**S2S3** 

Orchidaceae (Orchid Family)

Cons/Econote: All Frederick County stations have experienced dramatic declines and declines at other locations are suspected. The paucity of records from the Eastern Shore conflicts with statements in the Herbaceous Plants of Maryland that state the species is frequent in that region. This species may be particularly limited by availability and local abundance of host fungi (McCormick et al. 2012). However, it occurs in young stands of hardwoods and past clearings that may indicate the ability to colonize recently disturbed habitats. **Habitat**: Rich mesic forests, often over mafic (limestone, shell-marl) or ultramafic (serpentine, diabase) substrates but may occur over

more acidic substrates on the Coastal Plain.

Distr. AP, CP, PD, RV (Allegany, Anne Arundel, Baltimore, Calvert, Carroll, Charles\*, Frederick, Garrett, Howard, Montgomery, Prince George's, Queen Annes, St. Mary's\*, Washington, Worcester).

Flw: Late May-Jun (peak early June in most localities); Fr: Jul-Aug.

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Liparis loeselii (Linnaeus) L.C. Richard Loesel's Twayblade G5 S1S2

Orchidaceae (Orchid Family)

Cons/Econote: Perhaps declining statewide, this species has few recent reports and most populations reported to contain fewer than 20 individuals. Most stations require active habitat management to control invasive species.

**Habitat**: Seeps from mafic or ultramafic substrates, sea level fens, shaded, mesic limestone slopes.

**Distr**. AP, CP, PD, RV (Allegany, Baltimore, Frederick, Garrett, Howard, Montgomery, Washington, Wicomico, Worcester).

Flw: Jun; Fr: Jul-Aug.

# Lipocarpha micrantha (Vahl) G. Tucker

**Dwarf Bulrush** 

G5

**S**1

Ε

Cyperaceae (Sedge Family)

**Svn**: Hemicarpha micrantha (Vahl) Pax

Cons/Econote: Widespread annual of river drawdown zones and very rare regionally. Endangered by sedimentation as well as competition/displacement by invasive species.

**Habitat**: Riparian shorelines in muddy/sandy soil exposed (in summer months) during low-flow periods.

**Distr**. PD (Howard, Montgomery).

# Listera australis Lindley

Southern Twayblade

G4

**S**3

Orchidaceae (Orchid Family)

Cons/Econote: An inconspicuous and early-blooming orchid that is often overlooked. Locally frequent in Worcester County.

**Habitat**: Swamp forests, pine flatwoods in wet or seasonally saturated sandy or organic soils.

Distr. CP (Anne Arundel, Dorchester, Prince George's, Somerset, St. Mary's, Talbot, Wicomico, Worcester).

Flw: late Apr- mid May; Fr: Jun.

# Listera cordata (Linnaeus) R. Brown

Heartleaf Twayblade

G5T5

SHX

Orchidaceae (Orchid Family)

**Taxnote**: Maryland plants are var. *cordata*.

**Cons/Econote**: Circumboreal, extending south to the highlands of West Virginia and historically to Garrett County (several collections 1932-1934).

**Habitat**: Shrubby thickets in mountain peatlands, associated with rosebay rhododendron (*Rhododendron maximum*).

**Distr**. AP\* (Garrett\*).

# Listera smallii Wiegand

Kidneyleaf Twayblade

G4

S1Ε

Orchidaceae (Orchid Family)

Cons/Econote: Endangered by habitat loss and fragmentation. A southern and central Appalachian endemic.

**Habitat**: Acidic forested seeps and swamps often with red spruce (*Picea rubens*) and Canada hemlock (*Tsuga canadensis*).

**Distr**. AP (Garrett). Flw: Jul; Fr: Sept.

Lithospermum latifolium Michaux

American Gromwell

G4

**S**1

Ε

Boraginaceae (Borage Family)

Cons/Econote: Endangered by competition with exotic, invasive species. Maryland stations comprise very few individuals.

Habitat: Rich woods, often over alluvial soils.

**Distr.** PD, RV (Allegany, Cecil, Montgomery\*, Washington).

Lithospermum parviflorum Weakley, Witsell & D. Estes

Hairy False Gromwell

G4G5

**S**1

E

Boraginaceae (Borage Family)

Syn: Onosmodium molle Michaux ssp. hispidissimum (Mackenzie) Boivin

Onosmodium molle Michaux var. hispidissimum (Mackenzie) Cronquist

Onosmodium hispidissimum Mackenzie

Cons/Econote: Restricted to a single station in Maryland. Endangered by deer browse, fire suppression, competition with invasive plant species and by the demographic uncertainties of small population size.

Habitat: Limestone glade.

Distr. RV (Allegany).

# Lithospermum virginianum Linnaeus

Virginia False Gromwell

G4

**S**1

Е

Boraginaceae (Borage Family)

Syn: Onosmodium virginianum (Linnaeus) A.P. de Candolle

Cons/Econote: Restricted in Maryland to the Potomac Gorge, our populations comprise a few scattered individuals. As discussed by Weakley (2015) this species exhibits tolerance to a wide variety of substrates but with the unifying characteristic of an open woodland habitat.

**Habitat**: Riverine island uplands over well-drained to xeric, sandy substrates.

**Distr**. CP\*, PD (Montgomery, Prince George's\*).

Litsea aestivalis (Linnaeus) Fernald

Pondspice

G3

S1Ε

Lauraceae (Laurel Family)

**Cons/Econote**: Restricted to a single station at the northern range limit for this species.

Habitat: Delmarva Bay. Distr. CP (Wicomico).

Flw: mid Apr-early May; Fr: Jun-Oct.

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Canby's Lobelia G4 Lobelia canbyi A. Grav S2 Ε

Campanulaceae (Bluebell Family)

**Cons/Econote**: The past conversion of habitats to commercial timber production has altered the surface flow of water (e.g., windrows), the subsurface or groundwater hydrology (e.g., ditches) as well as having covered large areas of critical habitat with dense loblolly pine (*Pinus taeda*) plantations. Periodic clear-cutting of harvestable timber co-occurs with population expansions. Recent progress in land protection activities and management plans has assisted in conservation of this species. State status under review.

**Habitat**: Delmarva Bays, pine flatwoods and open pine barren-like swales under powerlines.

**Distr**. CP (Dorchester, Wicomico, Worcester).

Flw: (late Jul) Aug-Oct; Fr: Oct-Nov.

# Lobelia elongata Small

Elongated Lobelia

G4G5

**S**3

Campanulaceae (Bluebell Family)

Cons/Econote: Easily overlooked when not at peak flower. Perhaps declining due to sea level rise, but this is speculative; other threats include displacement by common reed (*Phragmites australis*). State rank under review.

Habitat: Tidal marshes.

Distr. CP (Dorchester, Somerset, Wicomico, Worcester).

Flw: Sept; Fr: Oct-Nov.

#### Lonicera canadensis Bartram ex Marshall

American Fly Honeysuckle G5

S1

Ε

Caprifoliaceae (Honeysuckle Family)

Cons/Econote: Currently extant at a single site on the Alleghany Plateau, however other potential and historic locations have been reported. Endangered by habitat loss long-term and extensive deer browse in the near-term.

**Habitat**: Partially open northern hardwood forests dominated by spruce and hemlock; adjacent to coniferous swamps, and rocky streams. Associated with habitats underlain by the Greenbrier Formation that is rich in limestone deposits.

**Distr**. AP, RV? (Allegany?, Garrett).

Flw: May; Fr: Jun.

# Ludwigia decurrens Walter

Primrose-willow

G5

**S2S3** 

Onagraceae (Evening Primrose Family)

Cons/Econote: Somewhat threatened by encroaching non-native species, e.g., common reed (*Phragmites australis*) but also by expanding stands of native species e.g. water willow (Decodon verticillatus).

Habitat: Sunny, seasonally saturated wetlands around beaver ponds, shrub swamps, and emergent freshwater marshes. Often inhabiting drawdown zones in sandy, gravelly or mucky soils.

**Distr**. CP, PD (Caroline\*, Charles, Harford, Howard, Montgomery, Prince George's).

Flw: Aug-late Sept; Fr: Sept-early Oct. (fruits and flowers may generally be found together in Sept.).

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Cylindric-fruit Seedbox Ludwigia glandulosa Walter G5T5 **S**1 Ε

Onagraceae (Evening Primrose Family)

**Taxnote**: Maryland plants are ssp. *glandulosa*.

Cons/Econote: Occurring in Maryland at its northern range limit and rediscovered in Maryland 120 years after its initial collection (see Knapp et al. 2011).

**Habitat**: Low, open seasonally inundated roadside swale/ditch.

**Distr**. CP (Somerset).

# Ludwigia hirtella Rafinesque

Hairy Ludwigia

G5

**S**1 Ε

Onagraceae (Evening Primrose Family)

Cons/Econote: A species of pine savannas to our south. Maryland stations occur in artificially maintained habitats that mimic its natural habitat. Fire exclusion likely plays a role in this species' rarity.

**Habitat**: Open, wet meadows (powerlines), road shoulders and other clearings in sandy/peaty soil.

**Distr**. CP (Prince George's\*, Wicomico, Worcester).

# Lupinus perennis Linnaeus

Sundial Lupine

G5

**S**2

T

Fabaceae (Legume Family)

Cons/Econote: Threatened by habitat loss and under decline at most stations with several small populations now extirpated. J. Frye (2012) demonstrated a dramatic effect of browsing white-tailed deer on fruit and seed production. The Service is managing and in some cases restoring connectivity between populations in Worcester County as breeding habitat for the globally rare Frosted Elfin (Callophyrs irus).

**Habitat**: Dry sandy soils of inland dunes and sand ridge woodlands, sandy powerline meadows, dry rocky slopes and outcrops.

Distr. AP\*, CP, PD, RV (Allegany, Anne Arundel, Baltimore, Caroline, Carroll, Charles, Dorchester, Garrett\*, Howard, Prince George's\*, Washington, Wicomico, Worcester).

Flw: May-early Jun; Fr: late Jun-early Jul.

Lycopodiella caroliniana (Linnaeus) Pichi Sermolli

see Pseudolycopodiella caroliniana (Linnaeus) Holub

# Lycopodiella inundata (Linnaeus) Holub

**Bog Clubmoss** 

G5

**S**2

Lycopodiaceae (Clubmoss Family)

Svn: Lycopodium innundatum Linnaeus

Cons/Econote: Circumboreal, ranging south along the Appalachians. Largely restricted to the Allegheny Plateau but with a few oddly disjunct occurrences.

Habitat: Mountain peatlands, sphagnous seeps.

Distr. AP, PD\*, RV (Baltimore\*, Frederick, Garrett).

Scientific Name	Common Name	Global Rank		State Federal Status Status			
Lycopodium tristachyum Pursh	see Diphasiastrum tristachyum (Pursh) Holub						
Lycopus amplectens Rafinesque Lamiaceae (Mint Family)	Sessile-leaf Bugleweed	G5	<b>S</b> 1	E			
Cons/Econote: Endangered by habitat loss, chiefly by woody su Habitat: Sunny, sphagnous seeps and fens.  Distr. CP (Wicomico, Worcester*).  Flw: Sept; Fr. Oct.	ccession of open, boggy habi	tats.					
Lygodium palmatum (Bernhardi) Swartz Lygodiaceae (Climbing Fern Family)	Climbing Fern	G4	<b>S</b> 2	T			
Cons/Econote: Well-documented by historical collections (pre-1900) from areas where the species is no longer extant, suggestive of a long-term decline in the range and abundance of this species. Currently comprising a few zones of local frequency but otherwise scattered, isolated and generally with low population sizes.  Habitat: Wet thickets, low woods, streambanks and Fall-line seeps.  Distr. CP, PD (Anne Arundel, Baltimore*, Calvert*, Cecil, Charles, Harford*, Howard*, Kent, Montgomery*, Prince George's, Wicomico/Worcester).							
Lysimachia hybrida Michaux Primulaceae (Primrose Family)	Lowland Loosestrife	G5	S2	T			
<b>Cons/Econote</b> : Threatened by habitat loss and displacement by a occurs generally as scattered patches.		species' broad	within-St	ate range the plant			
<b>Habitat</b> : Mesic hardwood forests, Delmarva Bays, floodplain fo <b>Distr</b> . CP, PD, RV (Allegany, Caroline, Dorchester, Kent, Harfo <b>Flw</b> : mid Jul-mid Aug; <b>Fr</b> : Sept-Oct.		ne's, Washing	ton, Worce	ester).			
Lysimachia lanceolata Walter Primulaceae (Primrose Family) Habitat: Riverside prairie scour bars, moist depressions in rich v Distr. CP, PD (Anne Arundel, Cecil*, Charles, Montgomery, Qu Flw: late Jul-Aug; Fr: Sept-Oct.		G5	S3				
Lysimachia maritima (Linnaeus) Galasso, Banfi, & Soldano	Sea Milkwort	G5	SH	X			

Cons/Econote: A single record of this species from the Chester River documented by collections from 1903-1936.

Primulaceae (Primrose Family) **Syn:** *Glaux maritima* Linnaeus

Global State State Federal Common Name Rank Status Status Scientific Name Rank **Habitat**: "Between tides on both shores of the Chester River below Chestertown." **Distr**. CP\* (Kent\*, Queen Anne's\*). Lysimachia thyrsiflora Linnaeus **S**1 Water Loosestrife G5 Ε Primulaceae (Primrose Family) **Cons/Econote**: Circumboreal, south to Maryland at a single station (see Steury et al. 1996). **Habitat**: Baymouth barrier wetland (Sipple 1982) in peaty soil. **Distr**. CP (Kent). Lythrum alatum Pursh Winged Loosestrife **S**1 G5 E Lythraceae (Loosestrife Family) Cons/Econote: Maryland stations are small (~30 plants each) and their occurrence in any given year is unpredictable. **Habitat**: Riverside prairie scour bars along the Potomac River. Distr. AP, CP\*, PD, RV (Frederick, Garrett, Montgomery, Prince George's\*). Flw: late Jul-Aug; Fr: Aug-Sept. Magnolia tripetala (Linnaeus) Linnaeus Umbrella Magnolia **S**3 G5 Magnoliaceae (Magnolia Family) Cons/Econote: Occurring predominately in Piedmont forests and near the northern range limit for the species, the native within-State range is somewhat obscured by naturalized garden escapes (see also Riefner & Hill 1983). Rhoads (1994) similarly found the species to

be rapidly expanding its range in the vicinity of Philadelphia, PA, presumably from planted individuals. Co-occurs with M. macrophylla (naturalized) along the Patapsco River in Maryland.

Habitat: Mesic hardwood forests, rich ravines.

**Distr**. AP, CP, PD (Baltimore, Calvert, Charles, Garrett, Harford, Howard, Prince George's).

**S**2 Maianthemum stellatum (Linnaeus) Link Starflower Solomon's-plume G5 Ε

Asparagaceae (Asparagus Family)

Syn: Smilacina stellata (Linnaeus) Desfontaines

Cons/Econote: Endangered by loss of mature hardwood forests. **Habitat**: River banks and terrace forests in rich alluvial substrates. Distr. PD, RV (Frederick, Harford, Montgomery, Washington).

Flw: May; Fr: Jun-Jul (Sept).

Malaxis unifolia Michaux Green Adders-mouth Orchid G5 **S1S3** Orchidaceae (Orchid Family)

Scientific Name Global State State Federal Rank Rank Status Status

**Cons/Econote**: Perhaps declining; many Maryland records are approaching historical dates (last observed  $\geq 30$  years before present). The conservation rank of this species has not been determined.

Habitat: Swamp forests, acidic seeps.

**Distr**. AP, CP, PD\*, RV (Allegany\*, Baltimore\*, Charles\*, Frederick, Garrett, Montgomery\*, Prince George's\*, St. Mary's, Wicomico\*, Worcester; distribution incomplete).

Flw: late Jun-early Jul; Fr: Jul-Sept.

# Malus angustifolia (Aiton) Michaux

Southern Crabapple

G5

**S**3

Rosaceae (Rose Family)

Syn: Pyrus angustifolia Aiton

**Cons/Econote**: Noted by Hill (1986) as widespread on Assateague Island and collected by E. Higgins from the island as var. *spinosa* (Rehder) L.H. Bailey. The species occurs sporadically and with uncertain nativity at many locations (old farmsteads, field hedgerows, etc.) but the proliferation of names on specimens, *Pyrus* and *Malus* among them, and the age of these collections recommends a more thorough investigation.

Habitat: Maritime shrub thickets, field edges, old fields and farmsteads, hedgerows, roadsides.

**Distr**. AP, CP, PD, RV (Allegany, Caroline, Carroll, Frederick, Garrett, Howard, Montgomery, Prince George's, Worcester).

#### Matelea carolinensis (Jacquin) Woodson!

Carolina Anglepod

G4

S2S3 E(PT)

Apocynaceae (Dogbane Family)

**Cons/Econote**: A native species of forest edges, clearings and streambank light gaps. Unfortunately, this species now contends with multiple invasive species that are aggressive competitors (e.g., *Ampelopsis brevipedunculata, Celastrus orbiculatus, Humulus japonicus, Lonicera japonica*). Low population sizes are reported for most stations and few are protected; however, the number of stations has steadily increased in recent years. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Forest edges, riparian thickets, roadside clearings.

**Distr**. CP, PD\* (Anne Arundel, Calvert, Caroline, Cecil\*, Charles, Dorchester, Kent, Montgomery\*, Prince George's, Queen Anne's\*, Talbot, Worcester).

Flw: Jun-late Aug; Fr: Oct.

Matelea gonocarpos (Walter) Shinners

see Gonolobus suberosus (Linnaeus) R. Brown var. suberosus

# Matelea obliqua (Jacquin) Woodson

Climbing Milkweed

G4?

S1S2 E

Apocynaceae (Dogbane Family)

**Cons/Econote**: This species occurs in naturally disturbed lowlands (e.g., flood scoured) and in upland clearings (barrens, glades); these habitats are highly susceptible to invasive species. Maryland populations are invariably small and their occurrence is temporal, such that the number of occupied sites changes over years.

**Habitat**: Bedrock scour and terrace woodlands in rich alluvium, upland forests, barrens, glades, clearings, and roadsides over limestone or shale substrates.

Distr. CP\*, PD, RV (Allegany, Anne Arundel\*, Baltimore\*, Frederick, Montgomery, Washington).

Flw: Jun-Jul; Fr: Sept.

# Matteuccia struthiopteris (Linnaeus) Todaro

Ostrich Fern

G5

**S2S3** 

Onocleaceae (Sensitive Fern Family)

**Taxnote**: Maryland plants are var. pensylvanica (Willdenow) C.V. Morton.

**Cons/Econote**: Nearly all Maryland populations persist (often as dense colonies) in narrow corridors of floodplain forest; these are often weedy and subject to heavy sedimentation. This is particularly so in the northern Piedmont along the Patapsco and Gunpowder Rivers. **Habitat**: Rich floodplain forests along large rivers.

**Distr**. AP, PD, RV (Allegany, Baltimore, Carroll, Cecil, Garrett, Harford, Howard, Montgomery, Prince George's\*, Washington).

#### Mecardonia acuminata (Walter) Small!

Purple Mecardonia

G5T5

S2 E

Plantaginaceae (Plantain Family)

Taxnote: Maryland plants are var. acuminata.

**Cons/Econote**: A southeastern species at its northern range limit in Maryland and Delaware. Coastal populations routinely occur in anthropogenic habitats where mowing regimes mimic natural disturbances. Piedmont populations (Potomac Gorge) generally occur in habitats maintained by flood scour. State status under review.

**Habitat**: Roadsides, sandpits, utility rights-of-way, rocky pools and seeps.

Distr. CP, PD (Charles, Montgomery, Prince George's, Somerset, Wicomico, Worcester).

**Flw**: late Aug-early Sept; **Fr**: Aug-Oct.

Melanthium latifolium Dessoureaux

see Veratrum hybridum (Walter) Zimmerman ex Zomlefer

Melanthium virginicum Linnaeus

see Veratrum virginicum (Linnaeus) Aiton

#### Melica mutica Walter

Narrow Melicgrass

G5

**S**3

Poaceae (Grass Family)

**Cons/Econote**: Small populations on the Western Shore with few individuals may be perceived as being restricted to rare or unusual habitats; these populations are best interpreted as remnants resulting from fragmentation. The habitat core for Maryland is along the Potomac River where the species may be locally frequent.

Habitat: Bedrock terrace woodlands, floodplains and mesic upland forests and shell-marl ravine forests.

**Distr**. CP, PD (Calvert, Charles, Montgomery, Prince George's\*).

Flw/Fr: early May-early Jun (Jul).

		Global	State	State	Federal
Scientific Name	Common Name	Rank	Rank	Status	Status
Melica nitens (Scribner) Nuttall ex Piper	Three-flower Melicgrass	G5	S2	T	

Poaceae (Grass Family)

Cons/Econote: Maryland populations comprise numerous small patches of individuals scattered across western Maryland. Threatened by habitat loss and likely fire suppression has played a role in this species' rarity.

Habitat: Dry forests over calcareous shale and limestone.

Distr. AP, RV (Allegany, Garrett, Washington).

Flw/Fr: mid May-Jun (Jul).

# Menyanthes trifoliata Linnaeus

Bog Buckbean

G5

S1Ε

Menyanthaceae (Buckbean Family)

**Cons/Econote**: Maryland populations form part of the species' fragmented southeastern range (to a single station in NC). Extremely rare and occupying only a few high elevation sedge meadows.

**Habitat**: Mountain peatlands.

Distr. AP (Garrett).

Micranthemum micranthemoides (Nuttall) Wettstein

#### see Hemianthus micranthemoides Nuttall

# Micranthes micranthidifolia (Haworth) Small

Lettuceleaf Saxifrage

G5

**S**3

Saxifragaceae (Saxifrage Family)

Syn: Saxifraga micranthidifolia (Haworth) Steudel

**Cons/Econote**: A southern and central Appalachian endemic.

**Habitat**: Spring seeps and mountain streams, generally at high elevations.

**Distr**. AP, RV\* (Frederick\*, Garrett).

#### Minuartia caroliniana (Walter) Mattfeld

Carolina Sandwort

G5

S1

E

Caryophyllaceae (Pink Family)

Syn: Arenaria caroliniana Walter

Cons/Econote: Single station in Wicomico County (Harrison 2002). Requires open, fire-prone habitats, susceptible to invading graminoids and successional hardwoods. The Service is employing prescribed fire to manage this population.

**Habitat**: Dry, white sands associated with openings in pine-oak woodland.

Distr. CP (Wicomico).

Flw: late Jun-Jul; Fr: Aug-Sept.

# Minuartia glabra (Michaux) Mattfeld

Appalachian Sandwort

G4

S1

Ε

Caryophyllaceae (Pink Family)

Syn: Arenaria glabra Michaux

Cons/Econote: Maryland contributes a single station to this species' oddly discontinuous range.

Habitat: Greenstone outcrop.

**Distr**. RV (Frederick).

Flw: May-mid Jun; Fr: Aug-Sept.

Minuartia michauxii (Fenzl) Farwell

Michaux's Stitchwort G5T5 S2

Caryophyllaceae (Pink Family) **Syn**: *Arenaria stricta* Michaux

Syn. Arenaria stricta iviiciaux

Taxnote: Maryland plants are var. michauxii.

**Cons/Econote**: Threatened by woody succession of open habitats, fire suppression, and to an unknown extent, fragmentation and isolation.

**Habitat**: Sunny to partly shaded outcrops over a variety of mildly acid (shale), mafic (shale, limestone) and ultramafic (serpentine) substrates.

**Distr.** PD, RV (Allegany, Cecil, Washington).

Flw: late May-mid Jun; Fr: Jul.

Moehringia lateriflora (Linnaeus) Fenzl

Grove Sandwort

G5

S1 E

Т

Caryophyllaceae (Pink Family)

Syn: Arenaria lateriflora Linnaeus

Cons/Econote: Circumboreal, occurring in Maryland near its southern range limit at a few high elevation sites.

**Habitat**: Forest and wetland ecotones.

Distr. AP (Garrett).

Flw: early Jun; Fr: Jul-Sept.

Monarda clinopodia Linnaeus

Basil Beebalm

G5

S3S4

Lamiaceae (Mint Family)

**Cons/Econote**: Maryland stations are dominated by multiple, small populations. Threats to this species are displacement by invasive species, particularly along the Potomac River and at its Piedmont stations.

**Habitat**: Rich alluvial soils of streams and rivers. Occasionally planted outside of its native range in roadside "meadows" as far east as the Eastern Shore.

Distr. AP, PD, RV (Allegany, Baltimore, Frederick, Garrett, Howard, Montgomery, Washington; distribution likely incomplete).

Flw: Jun-Jul; Fr: Jul-Sept.

Monarda media Willdenow

Purple Bergamot

G4?

SH

Lamiaceae (Mint Family)

State State Federal Global Common Name Rank Rank Status Status Scientific Name

**Taxnote**: The "species" perhaps representing a hybrid series involving as many as three other taxa: M. clinopodia, M. didyma and M. fistulosa (all of which occur in Maryland). This hypothesis largely based upon a study of essential oils by Scora (1967).

Cons/Econote: According to Weakley (2015) a species of high-elevation Appalachian balds in the southeastern U.S. In their review of the genus McClintock & Epling (1942) cite records for Cecil (no specimen listed), Garrett (Steele 85) and Prince George's (Hyacinth 1654) US) Counties. Although confusion with the more widespread M. clinopodia is possible, McClintock & Epling (1942) provide a nuanced discussion of the differences between these species. The Prince George's County specimen is possibly introduced (Shetler & Orli 2000) and the generalized distribution map for the species in McClintock & Epling (1942) shows an apparent eastern "bulge" in order to incorporate this location. NatureServe (2015) reports that the species is locally abundant in western MD; the Service is unsure of that attribution. A Washington County specimen (Cress 11815 MARY) has characters of several taxa including M. media and M. clinopodia but is not included in the distribution below.

**Habitat**: Mesic forests, edges and clearings, presumably at higher elevations.

**Distr**. AP\*, CP<sup>I</sup>, PD?, RV? (Cecil?, Garrett\*, Prince George's<sup>I</sup>).

# Monotropsis odorata Schweinitz ex Elliott

**Sweet Pinesap** 

G3

**S**1

Ε

Ericaceae (Heath Family)

**Cons/Econote**: Maryland populations constitute a unique disjunct from the species' primarily Appalachian range. Historically known from sandy woodlands in the Baltimore-Washington-Annapolis triangle, clearing for residential and commercial development has destroyed much suitable habitat. This species is now restricted to a single station where there has been a significant decline in the number of plants.

Habitat: Oak forest; historic sites described as "pine woods", "pine-oak scrub."

**Distr**. CP (Anne Arundel\*, Baltimore\*, Calvert, Prince George's\*).

**Flw**: Apr. 1-10. **Fr**: not observed.

#### Morella caroliniensis (P. Miller) Small

Evergreen Bayberry

G5

Ε S1

Myricaceae (Bayberry Family)

**Syn**: *Myrica heterophylla* Rafinesque

**Taxnote**: The taxonomic identity of this species is controversial. Robust plants of *M. pensylvanica* have often been reported as this species and identification of herbarium material is problematic.

**Cons/Econote**: Restricted to a single station at a highly vulnerable site.

**Habitat**: Fall Line seep over sand/gravel deposits.

**Distr**. CP?, CP/PD (Calvert?, Cecil, Wicomico?, Worcester?).

# Muhlenbergia capillaris (Lamarck) Trinius

Hair-awn Muhly

G5

**S**1 E

Poaceae (Grass Family)

**Cons/Econote**: Endangered by habitat loss. Maryland plants are restricted to the Potomac Gorge.

**Habitat**: Scour bar sayanna.

**Distr**. CP\*, PD (Montgomery, Prince George's\*).

Flw/Fr: late Sept.

Muhlenbergia glabriflora Scribner

Hairgrass

G4?

SH

Poaceae (Grass Family)

Syn: M. glabrifloris, an orthographic variant

**Cons/Econote**: A species of prairie-like or savanna habitats that may be rare throughout its range. Last collected (by F.L. Scribner) in 1888.

Habitat: Terrace gravel seepage bog, a "magnolia bog" (sensu McAtee 1918) at Hyattsville.

**Distr**. CP\* (Prince George's\*).

Muhlenbergia glomerata (Willdenow) Trinius

Marsh Muhly

G5

SH

Poaceae (Grass Family)

**Cons/Econote**: Last collected in 1908 presumably from the historical Thayersville Bog (now extirpated).

Habitat: Mountain peatland.

**Distr**. AP\* (Garrett\*).

Muhlenbergia sylvatica Torrey ex A. Gray

Woodland Muhly

G5

**S**3

Poaceae (Grass Family)

**Habitat**: Rocky, often steep forested slopes and river bluffs, generally over mafic substrates.

**Distr**. AP, CP\*, PD, RV (Allegany?, Baltimore\*, Cecil\*, Garrett, Harford, Prince George's\*, Washington).

Flw/Fr: Sept.

Muhlenbergia torreyana (J.A. Schultes) A.S. Hitchcock

Torrey's Dropseed

G3

S1 I

E

Poaceae (Grass Family)

**Cons/Econote**: This globally rare species of fire-prone coastal depressions is extant at a single station in Maryland.

**Habitat**: Delmarva Bay. **Distr**. CP (Caroline).

Flw/Fr: late Aug-early Sept.

Myosotis macrosperma Engelmann

Large-seed Forget-me-not

G5

**S3S4** 

Boraginaceae (Borage Family)

**Cons/Econote**: Not listed for Maryland by Shreve (1910) and once considered rare and restricted to southern Maryland (Western Shore); current trends indicate an expanding range.

**Habitat**: Appearing over a variety of mafic to mildly acidic substrates; often over disturbed ground, e.g., cultivated ground over shell-middens, field edges, and trailsides but also in rich woodlands, e.g., shell-marl ravine forests.

Distr. CP, PD, RV (Baltimore, Calvert, Cecil, Charles, Frederick, Harford, Kent, Prince George's, Queen Anne's, St. Mary's).

Flw: late Apr-late May; Fr: Jun.

Myosotis verna Nuttall

Spring Forget-me-not

G5

**S**3

Boraginaceae (Borage Family)

Cons/Econote: Reported from a variety of anthropogenic and natural habitats and perhaps overlooked.

**Habitat**: Fields, forest edges, woodlands, usually in dry sandy or gravelly soils.

Distr. CP, PD, RV (Baltimore, Caroline, Charles, Frederick, Montgomery, Prince George's, Wicomico).

Myriophyllum heterophyllum Michaux

Broadleaf Water-milfoil

G5

**S**1

Haloragaceae (Water-milfoil Family)

**Cons/Econote**: Widespread and common in the southeastern U.S.; our few records suggest rarity. Last observed by Frank Hirst in 1983 (Worcester County); however, the species has been reported from a number of reservoirs and ponds in western Maryland. Additional field work is necessary to determine the distribution, abundance and conservation rank of this species.

Habitat: Millpond, slow-moving coastal stream; reported from lakes and ponds in western Maryland.

**Distr**. AP?, CP (Charles\*, Garrett?, Wicomico\*, Worcester).

Myriophyllum tenellum Bigelow

Slender Water-milfoil

G5

SH X

Haloragaceae (Water-milfoil Family)

**Cons/Econote**: In Maryland near the southern end of its continuous range. Last reported for Savanna Lake (Dorchester County) by R.E. Stewart in 1954, but habitat at this location, presumably once freshwater, is now strongly brackish.

Habitat: Natural lakes and streams.

**Distr**. CP\* (Dorchester\*, Wicomico\*).

Myriophyllum verticillatum Linnaeus

Whorled Water-milfoil

G5

**S**1

Haloragaceae (Water-milfoil Family)

**Cons/Econote**: A circumboreal species reaching its southern range limit in Maryland. A species of circumneutral or base-influenced waters.

Habitat: Shallow water along Susquehanna River shoreline.

**Distr**. CP\*, PD (Harford, Worcester\*; distribution incomplete).

Nabalus autumnalis (Walter) Weakley

Slender Rattlesnake-root

G4G5

S1 E

Asteraceae (Aster Family)

Syn: Prenanthes autumnalis Walter

**Cons/Econote**: Endemic to the southeastern Coastal Plain and a species of pocosins and pine savannas, two fire-maintained habitats that have no close approximations in Maryland. Our populations occur in fragments of habitat where woody succession is limited by mowing,

generally under powerlines and along roadsides. Endangered by not enough disturbance on the one hand and by too much management (herbicide use, mowing too frequent or ill-timed) on the other.

**Habitat**: Open wet meadows in sandy/peaty soils.

Distr. CP (Wicomico, Worcester).

Flw: late Sept; Fr: Sept-Oct.

# Napaea dioica Linnaeus

Glade Mallow

G4

S1 E

Malvaceae (Mallow Family)

**Cons/Econote**: Once considered extirpated in Maryland, the basis for the Maryland record is a single specimen in the Oxford Herbarium (London, UK) from a garden plant grown from Maryland seed sent in the 1740s (Brown et al. 1987). Rediscovered in 1998 growing along a railroad embankment in Frederick County but the specimen was not identified until 2003. This prairie species often occupies artificially maintained habitats even in the core of its range so the Maryland habitat is not unusual (see also Wieboldt 1998).

**Habitat**: Embankment adjacent to the Potomac River floodplain.

Distr. RV (Frederick).

Nemopanthus mucronatus (Linnaeus) Trelease

see *Ilex mucronata* (Linnaeus) M. Powell, V. Savolainen, & S. Andrews

#### Nemophila aphylla (Linnaeus) Brummitt

Small-flower Baby-blue-eyes

G5

S2

Boraginaceae (Borage Family)

**Cons/Econote**: Often locally abundant although the range in Maryland is nearly restricted to a two-county area in southern Maryland on the Western Shore. Disjunct occurrences are located on limestone glades in western Maryland.

Habitat: Rich alluvium along streams rich soils of bluffs and ravines; limestone glades.

Distr. CP, RV (Allegany, Charles, Prince George's, Washington).

Flw: early Apr-May; Fr: Jun.

# Nymphoides aquatica (Walter ex J.F. Gmelin) Kuntze

Big Floatingheart

G5

S1 E

Menyanthaceae (Buckbean Family)

**Cons/Econote**: Endemic to the southeastern Coastal Plain and reaching its northern range limit in Maryland. Endangered by woody succession of pond habitat, fragmentation and isolation of remaining habitats.

Habitat: Delmarva Bay, millponds.

**Distr**. CP (Anne Arundel\*, Caroline, Dorchester).

# Nymphoides cordata (Elliott) Fernald

Little Floatingheart

G5

S1 E

Menyanthaceae (Buckbean Family)

**Cons/Econote**: A species of cool northern climes at the southern limit of the species continuous range (disjunct occurrences in NC and MS). Endangered by woody succession of aquatic habitat, fragmentation and isolation of remaining habitats.

Habitat: Ponds, shrub swamps.

**Distr**. CP, RV (Dorchester, Frederick, Wicomico\*, Worcester).

Oenothera argillicola Mackenzie

Shale Barren Evening-primrose G3G4

Onagraceae (Evening Primrose Family)

Cons/Econote: Endemic to the central Appalachian Shale Barren region (sc. PA south through MD to e. WV and w. VA).

Habitat: Shale barrens.

Distr. RV (Allegany, Washington).

Oldenlandia uniflora Linnaeus

Clustered Bluets

G5

**S**3

**S**3

Rubiaceae (Madder Family)

Syn: Hedyotis uniflora (Linnaeus) Lamarck

**Cons/Econote**: A tiny annual plant associated with Delmarva Bays but not strictly tied to those habitats. The unifying characteristic is open, exposed muck, sand or peaty soils in open or lightly shaded situations.

**Habitat**: Delmarva Bays and other seasonally flooded wetlands.

Distr. CP (Anne Arundel, Calvert\*, Caroline, Charles, Dorchester, Kent, Prince George's, Queen Anne's, Somerset, Wicomico,

Worcester).

Flw: Sept; Fr: Oct-Nov.

Oligoneuron rigidum (Linnaeus) Small var. rigidum

see Solidago rigida Linnaeus var. rigida

Orbexilum psoralioides (Walter) Vincent

False Scurfpea

G4

SX

Fabaceae (Legume Family)

Syn: O. pedunculatum (P. Miller) Rydberg var. psoralioides (Walter) Isley

Psoralea psoralioides (Walter) Cory

**Taxnote**: Maryland plants are the species of the Atlantic Coastal Plain, sometimes treated as a variety of *O. pedunculatum*.

Cons/Econote: Appears in the Colonial Flora of Maryland before 1700 (Brown et al. 1987).

**Habitat**: No habitat noted on labels; a plant of savannas and woodlands (Weakley 2015).

Distr. CP ("southern Maryland").

Orthilia secunda (Linnaeus) House

One-side Wintergreen

G5

SH X

Ericaceae (Heath Family)

Syn: Pyrola secunda Linnaeus

**Cons/Econote**: The eastern U.S. populations (south of New Jersey) of this circumboreal species appear to have been extirpated although there are many historical collections from Maryland ranging from about 1895-1952. Plants reported at the Anne Arundel County station have not been observed flowering and the identity is doubtful.

**Habitat**: Dry forests.

**Distr**. CP\*, PD\*, RV\* (Anne Arundel?, Calvert\*, Charles\*, Frederick\*, Montgomery\*, Prince George's\*).

Oryzopsis asperifolia Michaux

Mountain-ricegrass

G5

**S**2

T

Poaceae (Grass Family)

Cons/Econote: Confined to narrow zones of available habitat in western Maryland (where it may be locally frequent) but with a highly clumped and limited distribution.

Habitat: Dry to mesic rich forests and woodlands, often over mafic (shale, limestone) substrates.

Distr. AP, RV (Allegany, Garrett). Flw/Fr: mid May-early Jun (Sept).

Oryzopsis racemosa (Smith) Ricker ex A.S. Hitchcock

see Patis racemosa Romaschenko, P.M. Peterson & Soreng

Oxydendrum arboreum (Linnaeus) A.P. de Candolle

Sourwood

G5

S1

E

Ericaceae (Heath Family)

**Cons/Econote**: A characteristic and common subcanopy tree south of Maryland, our few scattered records represent remnant populations near the northern range limit. The geography of the populations is interesting; presumably recolonizing its post-Pleistocene range via the southern tip of the Delmarva Peninsula with a marked disjunction along the high elevations of the Appalachian Plateau into adjacent Pennsylvania. The coastal stations are presumed extirpated.

**Habitat**: Mesic to dry acidic forests.

**Distr**. AP, CP\* (Charles<sup>I</sup>, Garrett, Queen Anne's\*, Worcester\*).

Oxypolis canbyi (J.M. Coulter & Rose) Fernald

see Tiedemannia canbyi (J.M. Coulter & Rose) Feist & S.R. Downie

Packera antennariifolia (Britton) W.A. Weber & Á. Löve

Shale-barren Ragwort Cat's-paw Ragwort

G4

**S**3

Asteraceae (Aster Family)

Syn: Senecio antennariifolius Britton

Cons/Econote: Endemic to the central Appalachian shale barren region (sc. PA south through MD to e. WV and w. VA). Frequent, but not abundant in habitat.

**Habitat**: Shale barrens and woodlands.

Distr. RV (Allegany, Washington).

Flw: mid Apr; Fr: May-Jun.

Packera paupercula (Michaux) Á. & D. Löve

Balsam Ragwort

G5

**S**3

Asteraceae (Aster Family)

Syn: Senecio pauperculus Michaux

**Habitat**: Meadows and glades over mafic (limestone) or ultramafic (serpentine) substrates.

Distr. PD, RV (Baltimore, Carroll, Frederick, Harford, Montgomery, Washington).

# Panax quinquefolius Linnaeus

American Ginseng

G3G4

**S2S3** 

Araliaceae (Ginseng Family)

Cons/Econote: At one time occurring throughout Maryland. Despite international, national and state regulations to monitor trade populations have been declining via legal and illegal collecting to supply the medicinal herb trade, a situation exacerbated by intensive browse by white-tailed deer. Harvesting was banned on public lands in Maryland in 2013.

Habitat: Dry to dry-mesic hardwood forests.

Distr. AP, CP, PD, RV (Allegany, Baltimore, Caroline, Carroll\*, Cecil, Charles\*, Frederick, Garrett, Talbot\*, Montgomery\*, Prince George's\*, Washington).

Flw: late May-mid Jun; Fr: Jul-Sept.

# Panicum flexile (Gattinger) Scribner

Wiry Witch Grass

G5

S1

Ε

Poaceae (Grass Family)

**Cons/Econote**: Endangered by habitat loss, fire exclusion and competition with invasive species.

Habitat: Limestone and serpentine glades.

**Distr.** PD, RV (Baltimore\*, Harford, Montgomery\*, Washington).

Flw/Fr: mid-Sept.

# Panicum hemitomon J.A. Schultes

Maidencane

G5

**S**3

Poaceae (Grass Family)

**Taxnote:** According to Zuloago & Morrone (2003) this species is best treated as *Hymenachne hemitomon* (Schultes) C.C. Hsu.

Cons/Econote: A characteristic component of Delmarva Bay plant communities, most visible in early summer when the ponds are full.

**Habitat**: Delmarva Bays.

**Distr**. CP (Caroline, Dorchester, Queen Anne's, Wicomico, Worcester).

# Panicum philadelphicum Bernhardi ex Trinius

Philadelphia Panicgrass

G5

SU

Poaceae (Grass Family)

Syn: P. tuckermanii Fernald

P. capillare Linneaus var. sylvaticum Torrey

Cons/Econote: Provisionally rare, in part due to the age of the existing collections (overwhelmingly pre-1940). This may or may not be meaningful. Additional fieldwork is needed to distinguish the habitat associations and current distributions of the subspecies (ssp. philadelphicum and ssp. gattingeri). The distribution below is for ssp. philadelphicum.

**Habitat**: Rocky or sandy woodlands and barrens, fields, roadsides.

**Distr**. AP\*, CP\*, PD, RV\* (Baltimore, Calvert\*, Caroline\*, Carroll\*, Cecil\*, Charles\*, Garrett\*, Montgomery, Prince George's\*, Queen Anne's\*, St. Mary's\*, Talbot\*, Washington\*).

# Parnassia asarifolia Ventenat

Kidneyleaf Grass-of-parnassus G4

S1 E

Parnassiaceae (Grass of Parnassus Family)

**Cons/Econote**: Endangered by habitat loss. Maryland populations are disjunct from the Appalachian/Ozarkian core and are the northernmost (and likely easternmost) populations in the U.S.

Habitat: Sandy/gravelly seepage swamps.

**Distr**. CP (Calvert, Charles). **Flw**: Sept; **Fr**: Sept-Oct.

# Paronychia virginica Sprengel

Yellow Nailwort

G4

S1 E

Caryophyllaceae (Pink Family)

Virginia Whitlow-wort

**Taxnote**: Maryland plants are var. *virginica*.

**Cons/Econote**: Occurring in highly restricted habitats along the Potomac River, Maryland occurrences of this plant are small, none larger than 100 plants and most smaller than 20.

Habitat: Rocky scour bars with a high frequency of flooding.

Distr. PD, RV (Allegany, Montgomery).

#### Parthenium integrifolium Linnaeus

Wild Quinine

American Feverfew

G5T5

S1 E

Asteraceae (Aster Family)

**Taxnote**: Maryland plants are var. *integrifolium*.

**Cons/Econote**: Populations in Allegany County were destroyed by road widening activities in the 1990s. Currently, this species occurs at a single station with only a few stems.

**Habitat**: Shaley roadsides, limestone and other mafic outcrops.

**Distr**. CP\*, PD\*, RV (Allegany, Baltimore\*, Prince George's\*, Washington).

Flw: Jul-Aug; Fr: Sept.

#### Paspalum dissectum (Linnaeus) Linnaeus

Walter's Paspalum

G4?

S2 T

Poaceae (Grass Family)

**Cons/Econote**: Threatened by woody succession of coastal wetlands. This species typically grows in the mucky soils exposed after drawdown in open, sunny situations.

**Habitat**: Delmarva Bays and other seasonally flooded wetlands.

**Distr**. CP (Caroline, Queen Anne's, Somerset, Talbot, Wicomico, Worcester).

Flw/Fr: Aug-Sept (Oct).

# Scientific Name Common Name Rank Rank State State Federal Rank Paspalum fluitans (Elliott) Kunth! Horse-tail Paspalum G5 S2 E(PT)

Poaceae (Grass Family)

**Cons/Econote**: This species occurs at its northern range limit in Maryland in a narrow zone of habitats that generally support small populations. The number of stations and size of populations varies greatly over years. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Floodplain seeps and pools in muck soils; seasonally exposed rocky stream channels.

Distr. CP, PD (Charles, Montgomery).

**Flw/Fr**: late Aug-Sept (Oct).

Patis racemosa Romaschenko, P.M. Peterson & Soreng! Black-fruit Mountain-ricegrass G5 S2S3 T(PD)

Poaceae (Grass Family)

Syn: Oryzopsis racemosa (Smith) Ricker ex A.S. Hitchcock

Piptatherum racemosum (Smith) Barkworth

**Cons/Econote**: The Potomac River stations in Washington County are best considered one or a few highly fragmented populations although there are doubtless natural breaks between some sites (e.g., low elevation alluvial woods). Scattered elsewhere in Maryland at sites where calcium-bearing substrates are exposed (generally outcrops). The addition of a core population on State wildlands and discovery of additional populations has prompted the Service to forward a proposal to modify this species' State Status.

Habitat: Rich, often dry forests, limestone bluffs, mafic woodlands.

Distr. AP, RV (Allegany, Frederick, Garrett, Washington).

Flw/Fr: Jul-Sept (Oct).

# Paxistima canbyi A. Gray

Canby's Mountain-lover G2

**S**1

Celastraceae (Bittersweet Family)

**Cons/Econote**: Extant at a single station that has been severely impacted by browsing white-tailed deer. A regional endemic to the Appalachians exhibiting an enigmatic distribution comprising local zones of occurrence with large areas of unoccupied, yet apparently available habitat. Threatened by the exotic Euonymus scale (*Unaspis euonymi* Comstock) recently introduced into the U.S. (see discussion in Weakley et al. 2012).

Habitat: Calcareous shale bluff.

Distr. RV (Allegany).

#### Pedicularis lanceolata Michaux

Swamp Lousewort

G5

S1 E

Ε

Orobanchaceae (Broomrape Family)

Cons/Econote: Endangered by habitat loss via succession, sedimentation of marsh habitats, and competition with exotic invasive species.

Habitat: Mafic (Cockeysville marble, shell-marl) or ultramafic seeps, rich floodplain forests.

Distr. AP, CP, PD (Baltimore, Cecil, Dorchester, Harford, Garrett, Prince George's, Talbot\*, Wicomico\*).

Flw: Aug-early Sept; Fr: Oct.

#### State State Federal Global Scientific Name Rank Status Status Common Name Rank Smooth Cliffbrake Pellaea glabella Mettenius ex Kuhn G5T5 **S**1 E

Pteridaceae (Maidenhair Fern Family)

**Taxnote**: Maryland plants are ssp. *glabella*.

Cons/Econote: Comprised of a few small populations, this species occupies a highly restricted habitat that is threatened by displacement by invasive species.

**Habitat**: Dry limestone cliffs.

**Distr**. PD\*, RV (Frederick, Montgomery\*, Washington).

# Penstemon laevigatus Aiton

Smooth Beardtongue

G5

SU

Plantaginaceae (Plantain Family)

**Taxnote**: Maryland records include specimens that may be referable to *P. calycosus* Small and *P. alluviorum* Pennell (e.g., collections by E. Baltars from Baltimore County).

Cons/Econote: Documented by many collections (1897-2000) from sites along the Fall Line and Piedmont, but the majority of these specimens are now very old (1897-1950) and from areas that are now heavily urbanized. The Service is reconsidering the conservation rank of this species and is requesting additional information.

**Habitat**: Low meadows, riverside glades, field edges and other clearings.

**Distr**. CP, PD, RV (Baltimore\*, Carroll\*, Charles, Frederick\*, Montgomery, Prince George's\*).

# Persea palustris (Rafinesque) Sargent

Red Bay

G5

**S**1

Ε

Lauraceae (Laurel Family)

Syn: P. borbonia var. pubescens (Pursh) Little

Cons/Econote: Endangered by habitat loss; this species exhibits both short-term and long-term decline due to alteration of groundwater hydrology as well as saltwater intrusion into freshwater wetlands. Additionally threatened by a fungal disease spread by an Asian ambrosia beetle that is steadily moving northward from the Carolinas (NatureServe 2015).

**Habitat**: Bald cypress and Atlantic white cedar swamp, maritime woods.

Distr. CP (Somerset, Worcester).

Flw: Jun; Fr: Aug-frost

#### Persicaria robustior (Small) E.P. Bicknell

Stout Smartweed

G4G5

SU

X(PD)

Polygonaceae (Smartweed Family)

Syn: Polygonum robustius (Small) Fernald

**Taxnote**: The taxonomic identity of this species in Maryland is problematic. Populations of the common *P. punctata* are extremely variable regarding the distance between ocreolae, the number and length of cilia on the latter, and leaf dimensions.

Cons/Econote: Of the many historical reports for this wide-ranging (Nova Scotia south to FL, TX and into the tropics) species, many could not be relocated in the field and several were based upon specimens that are referable to *P. puncata*, *P. lapathifolia* and *P. glabra*. Not all records have been verified. Field and herbarium inventories are needed.

Habitat: Fresh tidal marshes and swamps.

**Distr**. CP (Anne Arundel\*, Cecil, Charles\*, Dorchester\*, Harford\*, Talbot?, Wicomico).

#### Persicaria setacea (Baldwin) Small

Swamp Smartweed G5

SU

Polygonaceae (Smartweed Family)

Syn: Polygonum setaceum Baldwin

**Cons/Econote**: The Service is unsure of the rarity of this species as it is very common to the south. Maryland populations are nearing the northern periphery of the species range. Perhaps overlooked.

**Habitat**: Swamp forests.

**Distr**. CP (Anne Arundel?, Calvert, Charles, Worcester).

# Phacelia covillei S. Watson ex A. Gray!

Coville's Phacelia

G3

S2 E(PT)

Boraginaceae (Borage Family)

Buttercup Scorpionweed

**Taxnote**: Fernald (1950) provided an inclusive concept of *Phacelia ranunculacea* (Nuttall) Constance remarking upon the disjunct nature of the occurrences stating that "probably of more general range." Sewell and Vincent (2006) made a case for recognizing two species based upon different chromosome numbers, although the morphological characteristics separating them are subtle.

**Cons/Econote**: Oddly distributed—Maryland populations are centered on the District of Columbia, one of the three widely disjunct areas of occurrence (also c. NC and sc. VA). Additionally, in Maryland there are two distinct zones of occurrence, the Potomac River and areas surrounding Western Branch; these best considered two large metapopulations. A somewhat characteristic spring ephemeral of rich, loamy forests and often locally abundant. However, the species is threatened by encroaching populations of the European weed, *Ficaria verna* (*Ranunculus ficaria*). Population size varies exponentially over years, from a few hundred to perhaps a million individuals. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Rich floodplain and terrace and ravine forests, mesic upland woods.

Distr. CP, PD (Montgomery, Prince George's).

Flw: mid Apr-early May; Fr: May-Jun.

# Phacelia purshii Buckley

Miami-mist

G5

**S**3

Boraginaceae (Borage Family)

**Habitat**: Rich alluvial soils of floodplains, terraces and low slopes.

Distr. AP, CP, PD, RV (Frederick, Garrett, Montgomery, Prince George's, Washington; distribution incomplete).

Flw: May; Fr: ?

# Phaseolus polystachios (Linnaeus) Britton, Sterns, & Poggenburg

Wild Kidney Bean

G5

**S**3

Fabaceae (Legume Family)

State State Federal Global Common Name Rank Rank Status Status Scientific Name

Cons/Econote: A native vine of habitats commonly described as "thickets"; this species may be declining due to displacement by numerous invasive shrubs and vines including Rosa multiflora, Celastrus orbiculatus and Lonicera japonica.

**Habitat**: Rocky ravines, scoured bedrock terrace forests, forest edges and hedgerows.

**Distr**. CP?, PD (Baltimore, Caroline?, Carroll?, Cecil, Howard, Montgomery).

# Phegopteris connectilis (Michaux) Watt

Northern Beechfern

**S**2

Thelypteridaceae (Marsh Fern Family)

Cons/Econote: A circumboreal species near its southern range limit in Maryland.

Habitat: Shaded cliffs and steep rocky slopes over sandstone and shaley siltstone.

**Distr**. AP (Garrett).

# Phemeranthus teretifolius (Pursh) Rafinesque

Roundleaf Fameflower

G4

G5

S2T

Montiaceae (Montia Family)

Syn: Talinum teretifolium Pursh

Cons/Econote: Threatened by woody succession of barrens habitat and fire exclusion.

**Habitat**: Exposed beds of serpentine, gneiss, and sandstone.

Distr. CP\*?, PD, RV (Allegany, Baltimore, Carroll, Cecil, Harford, Montgomery\*, Prince George's\*?).

Flw: Jun-Sept; Fr: Aug-Oct.

# Phlox glaberrima Linnaeus

Smooth Phlox

G5

**S**1

E

Polemoniaceae (Phlox Family)

Syn: P. carolina Linnaeus var. triflora (Michaux) Wherry

Cons/Econote: Restricted to a single population near its range limits in the eastern U.S., and otherwise endangered due to intense deer browse.

**Habitat**: Basic mesic forest over diabase.

**Distr.** PD (Montgomery).

#### Phlox ovata Linnaeus

Mountain Phlox

G4

SH X

Polemoniaceae (Phlox Family)

Syn: P. latifolia Michaux

Cons/Econote: A component of the historical flora of the shale barren region and now considered extirpated. The Service suspects that this species is still extant in the county.

**Habitat**: Shale barren woodlands.

**Distr**. RV\* (Allegany\*).

# Scientific Name Common Name Rank Rank State State Federal Rank Phlox pilosa Linnaeus Common Name Rank Status Status Status

Polemoniaceae (Phlox Family)

Syn: P. pilosa Linnaeus ssp. pilosa

P. pilosa Linnaeus var. virens (Michaux) Wherry

**Taxnote**: Brown & Brown (1984) refer to the District of Columbia area collections as var. *virens* (Michaux) Wherry, which is generally included within the concept of the species. Multiple intraspecific taxa have been named and additional study is needed.

**Cons/Econote**: A species of prairie-like openings, the Maryland station is restricted to a single outcrop. Endangered by displacement by woody shrubs and vines and deer browse. Sporadically collected from the District of Columbia and adjacent Montgomery County from about 1878-1929.

Habitat: Open meadow over amphibolite.

**Distr**. PD (Baltimore, Montgomery\*).

Flw: late May-early Jun; Fr: Jul.

# Phyllanthus caroliniensis Walter

Carolina Leaf-flower

G5T5?

**S**3

Phyllanthaceae (Leaf-flower Family)

**Taxnote**: Maryland plants are ssp. *caroliniensis*.

**Cons/Econote**: A widespread plant in the southeastern U.S. and South America; the native range is not clear. Recently rediscovered on the Delmarva Peninsula (Knapp et al. 2011). Of historical interest is that E. S. Steele (1901) noted that "the species could no longer be considered rare" after finding the plant in a variety of open, disturbed habitats in the District of Columbia and vicinity, presumably following the pulse of land-clearing during that period.

Habitat: Scour and depositional bars, river shorelines, sandy or gravelly wet soils.

Distr. CP, PD, RV (Frederick, Montgomery, Prince George's\*, Washington, Wicomico).

# Physalis virginiana P. Miller

Virginia Ground-cherry

G5

**S**3

Solanaceae (Nightshade Family)

**Cons/Econote**: This species may have been overlooked because this genus is so often associated with weedy old-field and pasture species.

Habitat: Dry woods and clearings.

Distr. CP\*, PD (Anne Arundel\*, Cecil, Montgomery).

# Picea rubens Sargent

Red Spruce

G5

**S**3

Pinaceae (Pine Family)

**Cons/Econote**: Highly sought by the timber industry in the late 1800s and early 1900s. *P. rubens* is now absent from many forest situations where it once was a component, especially in upland forests. Most current sites are confined to the fens and swamps of Garrett County where competition from hardwoods is less intense. This species has been the subject of restoration efforts through mass planting

State State Federal Global Scientific Name Common Name Rank Rank Status Status

of seedlings at several large wetland complexes, and one upland situation. Western MD stands are climatically and genetically isolated from the core of the species range in the central Appalachians (Keller & Trott 2017).

**Habitat**: High elevation swamp forests and mountain peatlands.

Distr. AP (Allegany, Garrett).

# Pilea fontana (Lunell) Rydberg

Springs Clearweed

G5

**S**3

SH

Urticaceae (Nettle Family)

Cons/Econote: Infrequent to locally common but not often identified as fruits are required to distinguish this species from the common P. pumila. Conservation status needs clarification and more field work is required.

**Habitat**: Tidal forests, shrub swamps and marsh fringes.

Distr. CP (Anne Arundel, Baltimore, Calvert, Cecil, Dorchester, Kent, Prince George's, St. Mary's\*, Talbot, Wicomico; distribution likely incomplete).

Piptatherum racemosum (Smith) Barkworth

see Patis racemosa Romaschenko, P.M. Peterson & Soreng

G4

#### Plantago cordata Lamarck

Plantaginaceae (Plantain Family)

Cons/Econote: Historically present along the Anacostia River and attributed to Maryland by an 1881 collection by C. S. Sheldon. The MD and District of Columbia historical stations are striking disjuncts from the species' core range in the upper Midwestern U.S.

**Habitat**: Sandy shoreline, "often growing in water".

**Distr**. CP\* (Prince George's\*).

# Platanthera blephariglottis (Willdenow) Lindley var. blephariglottis (Nash) Luer

White Fringed Orchid

Heartleaf Plantain

G4G5

**S**2

T

X

Orchidaceae (Orchid Family)

Syn: Habenaria blephariglottis (Willdenow) Hooker

Cons/Econote: Twelve extant populations ranging from one to 76 individuals. Roughly half of these populations are known from artificially maintained habitats such as powerline rights-of-way and roadsides.

**Habitat**: Open, acidic wetlands; forested seepage swamps, Atlantic white cedar swamps, usually associated with Sphagnum mosses.

**Distr**. CP (Anne Arundel, Baltimore\*, Baltimore City\*, Caroline, Charles\*, Prince George's, Wicomico, Worcester).

Flw: late Jun-early Jul; Fr: Aug-Sept.

# Platanthera ciliaris (Linnaeus) Lindley

Yellow Fringed Orchid

G5

**S**2 Т

Orchidaceae (Orchid Family)

**Svn**: *Habenaria ciliaris* (Linnaeus) R. Brown ex Aiton f.

Blephariglotis ciliaris (Linnaeus) Rydberg

**Cons/Econote**: This fire-dependent species is known from five small extant populations with an estimated fair viability due to woody plant succession and deer browsing. Historically, collections of this species are documented in Reed (1964) at 19 different locations throughout Maryland from 1860-1955. The Eastern Shore populations are believed extirpated.

**Habitat**: Open, acidic wetlands, boggy wetlands, usually associated with peaty substrates.

**Distr**. AP\*, CP, PD\*, RV (Anne Arundel, Baltimore, Baltimore City\*, Frederick, Garrett\*, Howard\*, Prince George's\*, Washington\*, Wicomico\*, Worcester\*).

Flw: mid-Jul to mid-Aug; Fr: Sept.

#### Platanthera cristata (Michaux) Lindley

Crested Yellow Orchid

G5

**S**3

Orchidaceae (Orchid Family)

**Syn**: *Habenaria cristata* (Michaux) R. Brown *ex* Aiton *f*.

Blephariglotis cristata (Michaux) Rafinesque

**Cons/Econotes**: This species has been documented to occur at more than thirty-five stations. Population viability has improved due to the State ownership of a network of potential supporting habitat, but population sizes (or our ability to detect individuals) have exhibited some downward trends. These trends may be temporal but detectability is greatly affected by roadside mowing.

**Habitat**: Open, acidic wetlands, boggy wetlands, forested seepage swamps.

**Distr**. CP, PD, RV (Anne Arundel, Caroline, Cecil, Dorchester, Frederick, Howard, Prince George's, Somerset, St. Mary's, Wicomico, Worcester).

Flw: mid-late Jul-early Aug; Fr: Aug-Oct.

# Platanthera flava (Linnaeus) Lindley

Pale Green Orchid

G4

**S**2

Orchidaceae (Orchid Family)

Syn: P. flava (Linnaeus) Lindley var. flava

P. flava (Linnaeus) Lindley var. herbiola (R. Brown ex Aiton) Luer

Habenaria flava (Linnaeus) R. Brown var. herbiola (R. Brown ex Aiton) Ames & Correll]

**Taxnote**: Recognition of varieties within *P. flava* is problematic. If recognized, both varieties are found in Maryland, with var. *flava* presumably restricted to the Eastern Shore.

Cons/Econote: Extant populations widely ranging in size from five to 350 individuals.

**Habitat**: Rich bottomland forests, forested seepage swamps, fringing ecotonal forest along tidal marsh.

**Distr**. AP, CP, PD, RV (Allegany, Anne Arundel, Baltimore, Caroline, Charles, Frederick, Garrett, Montgomery, Prince George's, Washington, Worcester).

Flw: late Jun-early Jul; Fr: Aug-Sept.

# Platanthera grandiflora (Bigelow) Lindley

Large Purple Fringed Orchid G5

S2 T

Orchidaceae (Orchid Family)

**Taxnote**: Not including *P. shriveri*.

**Cons/Econote**: Nine extant populations, three historical; populations range in size from one to 84 plants. Populations have been on a steep decline throughout Maryland for the past several decades, most likely due to herbivory by white-tailed deer.

**Habitat**: Minerotrophic forested seepage swamps and streamside seeps.

**Distr**. AP, PD\*, RV (Baltimore\*, Frederick, Garrett, Howard).

Flw: Jun-early Jul (peaking mid June in most locales); Fr: Aug-Sept.

# Platanthera peramoena (Gray) Gray

Purple Fringeless Orchid G5 S1S2 T

Orchidaceae (Orchid Family)

Syn: Platanthera fissa (Muhl. Ex Willd.) Lindley

Habenaria peramoena Gray

Blephariglotis peramoena (Gray) Rydberg

**Taxnote**: Recently, some authors have recognized this species as *P. fissa*; however *P. peramoena* is the proper name.

**Cons/Econote**: Extant populations all relatively small, ranging from one to 30 individuals. This state threatened species has been in decline since first collected by J.D. Smith in 1878. Currently, there are 20 historical populations with the remaining having fair to poor long-term viability.

**Habitat**: Fens, wet meadows, clearings, and ditches, sometimes in base-rich soils.

Distr. AP, CP\*, PD, RV (Allegany\*, Baltimore, Carroll, Cecil, Frederick, Garrett, Howard, Montgomery, Prince George's\*).

Flw: mid-late Jul; Fr: Aug-Sept.

# Platanthera psycodes (Linnaeus) Lindley

Small Purple Fringed Orchid G5

SH X

Orchidaceae (Orchid Family)

**Taxnote**: Historically, this plant has been confused with *P. peramoena* in floras and keys.

**Cons/Econote**: Sixteen historical populations, of which six were last seen in the 1980s. Some of these locations are sight records and may represent *P. peramoena*.

**Habitat**: Northern hardwood forests, other moist forests, seepages, and wet meadows.

**Distr**. AP\*, PD\*, RV\* (Baltimore\*, Cecil\*, Frederick\*, Garrett\*, Montgomery\*).

#### Platanthera shriveri P.M. Brown!

Shriver's Frilly Orchis G1 S1 (PE)

Orchidaceae (Orchid Family)

**Taxnote**: Recently separated as a distinct species by Brown et al. (2008). Closely resembling *P. grandiflora* and sometimes recognized as a hybrid between *P. grandiflora* and *P. lacera*. The long ascending nectar spur is unique among the purple-flowered orchids (NAOCC 2017).

**Cons/Econote**: Known from a single location, this species is readily identified by its late flowering period when compared to *P. grandiflora*. The Service has forwarded a proposal to list this species as endangered.

Habitat: Forested seepage swamps and stream banks.

State State Federal Global Scientific Name Common Name Rank Rank Status Status

**Distr**. RV (Frederick).

Flw: mid-late Jul; Fr: Aug-Oct.

Pleopeltis polypodioides (Linnaeus) E.G. Andrews & Windham Resurrection Fern

**S**3 G5T5

ssp. michauxiana (Weatherby) E.G. Andrews & Windham

Polypodiaceae (Polypody Family)

Syn: Polypodium polypodioides (Linnaeus) Watt

Polypodium polypodioides (Linnaeus) Watt var. michauxianum Weatherby

Habitat: Epiphyte on tree trunks, local to the Pocomoke River drainage.

**Distr**. CP (Wicomico, Worcester).

Pluchea camphorata (Linnaeus) A.P. de Candolle

Marsh Fleabane

G5

S1Ε

Asteraceae (Aster Family)

Cons/Econote: Maryland stations occur at the northern extent of the species' range and are localized to the Zekiah Swamp Run watersheds. Several older reports from salt marsh habitats are the common *Pluchea odorata*.

**Habitat**: Bottomland and swamp forests, often in canopy openings in mucky soils.

**Distr**. CP (Anne Arundel\*, Charles, Prince George's\*, Talbot\*, Worcester?).

Flw: late Aug-Sept; Fr: Sept-Nov.

Poa palustris Linnaeus

Fowl Bluegrass

G5

**S**1

Poaceae (Grass Family)

Cons/Econote: A circumboreal species occurring in Maryland near the southern range limits and confirmed by Rob Soreng from stations along the Youghiogheny and Casselman Rivers in Garrett County in 2016. Previous reports from Baltimore County (Monteferrante 076 BALT in 1973) and from Prince George's County (Suitland Bog, based upon F.G. Meyer 9233 NA in 1965) were in error. However, the species is a component of some commercial seed mixtures used for wet meadows and riparian site restoration and introductions outside of the native range are likely.

**Habitat**: Banks of rocky, high-gradient montane rivers.

**Distr**. AP (Garrett).

Flw/Fr: late Jun-early Jul.

Poa saltuensis Fernald & Wiegand

**Drooping Bluegrass** 

G5

**S**1

Ε

Poaceae (Grass Family)

**Cons/Econote**: Endangered by habitat loss and displacement by invasive species. Maryland stations contain few plants.

**Habitat**: Northern hardwood and cove forests, rich dry forests and mafic outcrops.

**Distr**. AP, PD\*, RV\* (Allegany\*, Baltimore\*, Garrett).

Flw/Fr: late May-Jun.

#### Global State State Federal Common Name Rank Rank Status Status Scientific Name Threadfoot G5 Podostemum ceratophyllum Michaux **S**3

Podostemaceae (Riverweed Family)

**Cons/Econote**: Rarely collected and even more rarely identified, the distribution and conservation status of this aquatic species requires substantial field work.

**Habitat**: Swiftly-flowing reaches of clear, rocky-bottomed streams.

**Distr.** CP, PD, RV (Allegany, Cecil, Garrett, Harford, Howard, Montgomery\*, Prince George's, Washington, Wicomico\*).

#### Pogonia ophioglossoides (Linnaeus) Ker-Gawler

Rose Pogonia

G5

**S**3

Orchidaceae (Orchid Family)

**Taxnote**: A white-flowered variant has been documented by Jim Stasz in Wicomico County.

**Habitat**: Acidic seeps and saturated sphagnous fens.

**Distr**. AP, CP, RV\* (Allegany\*, Anne Arundel, Baltimore\*, Caroline, Charles, Dorchester, Garrett, Prince George's, Queen Anne's\*, Wicomico, Worcester).

Flw: early-late Jun; Fr: Jul-Aug.

#### Polanisia dodecandra (Linnaeus) A.P. de Candolle

Common Clammyweed

G5T5

**S**1 Ε

Cleomaceae (Cleome Family)

**Taxnote**: Native plants are var. dodecandra; var. trachysperma (Torrey & A. Gray) Iltis is introduced from the western U.S. A few records (from RR tracks) have not have been determined to variety.

Cons/Econote: A single extant population. Steury et al. (1996) discuss the habitat and plant associates.

Habitat: Sand spits and beaches.

**Distr**. CP, PD\* (Anne Arundel?, Baltimore?, Harford\*, Kent).

# Polemonium vanbruntiae Britton

Bog Jacob's Ladder

G3G4

S2 T

Polemoniaceae (Phlox Family)

Cons/Econote: Threatened by habitat loss. This species responds well to some types of disturbance; unfortunately, these same disturbances often introduce non-native weeds. Bermingham & Brody (2011) discuss ecological and genetic factors affecting populations in the northeast.

**Habitat**: Minerotrophic fens, spring seeps; presumably circumneutral but this has not been sufficiently demonstrated.

**Distr**. AP (Garrett).

Flw: late Jun; Fr: Jul-Aug.

# Polygala cruciata Linnaeus

Crossleaf Milkwort

G5

**S**2 Т

Polygalaceae (Milkwort Family)

Cons/Econote: Threatened by habitat loss, chiefly woody succession of habitat. Maryland stations are often small, isolated and feeble populations.

Global State State Federal Common Name Rank Status Status Scientific Name Rank

**Habitat**: Open-canopied, acidic seepage wetlands in sandy/peaty or gravelly substrates with seasonal saturation.

**Distr**. CP (Caroline\*, Prince George's, Somerset, Wicomico, Worcester).

Flw: Aug-early Sept; Fr: Sept-Oct.

# Polygala incarnata Linnaeus

Pink Milkwort

G5

**S2S3** 

Polygalaceae (Milkwort Family)

Cons/Econote: One of the many components in our flora requiring intermittent disturbance to retard succession and maintain graminoiddominated communities.

**Habitat**: Dry to mesic open "prairie-like" grasslands, generally along roadsides or under powerlines.

**Distr.** CP, PD (Anne Arundel\*, Calvert, Caroline\*, Cecil, Charles, Howard, Montgomery, Prince George's, St. Mary's\*, Wicomico, Worcester).

Flw: Jul-Aug; Fr: Aug-Sept.

# Polygala polygama Walter

Racemed Milkwort

G5

S1

T

Polygalaceae (Milkwort Family)

Cons/Econote: Threatened by habitat loss, low population size and displacement by invasive species. Maryland stations are scattered and represented by very small (1-75 plants) populations.

**Habitat**: Dry, rocky or gravelly barrens, bedrock scour bars and woodlands.

Distr. CP, PD, RV (Allegany, Charles, Montgmery, Prince George's, Washington).

Flw: mid Jun; Fr: Jul.

# Polygala senega Linnaeus

Seneca Snakeroot

G4G5

S2

T

Polygalaceae (Milkwort Family)

Cons/Econote: Threatened by habitat loss, competition or displacement by invasive species and woody succession of barrens habitat.

Many of our stations are roadside outcrops and persistence in these habitats is always precarious.

Habitat: Sunny to lightly shaded outcrops of mafic and ultramafic substrates; limestone glades and shale woodlands.

Distr. AP, PD, RV (Allegany, Baltimore, Cecil\*, Garrett, Harford, Howard\*, Montgomery\*, Washington).

Flw: early-mid May; Fr: Jun.

Polygonum cilinode Michaux

see Fallopia cilinodis (Michaux) Holub

Polygonum robustius, P. setaceum

Polygonaceae (Smartweed Family)

see Persicaria

Polygonum glaucum Nuttall

Seabeach Knotweed

**G**3

S1

Ε

Scientific Name Global State State Federal Rank Rank Status Status

**Cons/Econote**: An annual plant of overwash flats; population size estimates for this species are extremely variable. Lea et al. (2000) report 5-10,000 plants in wash flats on the north end of Assateague Island in 1997 but following two significant storms in 1998 no plants were seen at that location but rather in scattered locations on the island in 1998-1999.

**Habitat**: Overwash zones along foredunes (Atlantic shoreline) actively eroding dunes and overwash zones on Bay islands.

**Distr**. CP (Somerset, St. Mary's, Worcester).

# Polygonum ramosissimum Michaux

**Bushy Knotweed** 

G5

SH X

Polygonaceae (Smartweed Family)

**Cons/Econote**: A rare annual of dynamic maritime habitats that was last collected in 1928.

Habitat: Beach.

**Distr**. CP\* (St. Mary's\*).

# Potamogeton amplifolius Tuckerman

Largeleaf Pondweed

G5

**S1S2** 

Potamogetonaceae (Pondweed Family)

**Cons/Econote**: Known from deep clear water of reservoirs and high-quality streams in western MD. Two coastal stations (Talbot and Wicomico) are almost certainly extirpated signaling perhaps a contracting range, but this remains speculative. The conservation rank for this species reflects both the natural habitats (lower rank) and the anthropogenic habitats (upper rank) where the species is sometimes locally abundant.

Habitat: Ponds, lakes, and rivers.

**Distr**. AP, CP\*, PD\*, RV (Allegany, Cecil\*, Garrett, Harford?, Prince George's?, Talbot\*, Wicomico\*; distribution likely incomplete).

# Potamogeton foliosus Rafinesque!

Leafy Pondweed

G5

S2 E(PD)

Potamogetonaceae (Pondweed Family)

**Cons/Econote**: Recent surveys have discovered several additional stations and the species has been found to occupy a variety of aquatic habitats. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Ponds and coastal streams in tidal and nontidal reaches, freshwater streams in w. MD.

Distr. CP, PD, RV (Allegany, Anne Arundel?, Calvert?, Howard?, Montgomery, Prince George's, Somerset?; distribution incomplete).

#### Potamogeton illinoensis Morong

Illinois Pondweed

G5

**S**2

Potamogetonaceae (Pondweed Family)

**Cons/Econote**: Currently known only from Town Creek and Sideling Hill Creek in western Maryland. Some historical locations may now be extirpated.

**Habitat**: Freshwater streams having higher pH waters influenced by limestone and calcareous shales.

**Distr**. PD\*, RV (Allegany, Baltimore\*, Harford\*, Washington\*).

#### Global State State Federal Scientific Name Common Name Rank Rank Status Status Potamogeton perfoliatus Linnaeus G5 Claspingleaf Pondweed **S**3

Potamogetonaceae (Pondweed Family)

Cons/Econote: Few new collections of this species but this may be an artifact of local taxonomic interest. Possibly declining along with other "Bay grasses" however, this has not been demonstrated.

**Habitat**: Tidal oligohaline to mesohaline waters within the Chesapeake Bay and its tributaries.

**Distr**. CP (Anne Arundel, Baltimore, Cecil, Charles, Dorchester, Harford, Kent, Prince George's, Queen Anne's, St. Mary's).

# Potamogeton pusillus Linnaeus

Slender Pondweed

G5

**S2S4** 

Potamogetonaceae (Pondweed Family)

Syn: P. berchtoldii Fieber

P. pusillus ssp. tenuissimus (Mertens & Koch) R.R. Haynes & C.B. Hellquist

**Taxnote**: Occurring in Maryland as both var. pusillus and as var. tenuissimus F.K. Mertens & W.D.J. Koch; the distributions of these taxa have not been determined.

Cons/Econote: Possibly declining due to heavy siltation of bay tributaries and competition/displacement by exotic species; however, species in this genus in general are rarely identified to variety and as such the distribution and abundance of these taxa remain poorly defined.

Habitat: Millponds and other impounded waters, fresh non-tidal and oligohaline tidal streams.

Distr. AP, CP, PD, RV (Allegany, Anne Arundel, Caroline\*, Carroll, Cecil, Charles, Garrett, Harford, Prince George's, Queen Anne's, Washington\*, Wicomico, Worcester\*).

# Potamogeton robbinsii Oakes!

Flatleaf Pondweed

G5

**S**1? X(PD)

Potamogetonaceae (Pondweed Family)

Robbins' Pondweed

**Cons/Econote**: Apparently rare (or historical) in the southeast, this species was documented by few collections from the early 1900s. However, the species has recently been inventoried in three reservoirs, these presumably founded via dispersal by waterfowl.

**Habitat**: Tidal freshwater aquatic vegetation beds, reservoirs. The Service has forwarded a proposal to modify this species' State Status.

**Distr**. AP, CP (Cecil\*, Garrett, Prince George's\*, Queen Anne's).

# Potamogeton spirillus Tuckerman

Spiral Pondweed

G5

SU

Potamogetonaceae (Pondweed Family)

Cons/Econote: The identities of several specimen-based records are uncertain and several previous reports have been re-identified as the more common *P. diversifolius*. There may in fact be no Maryland stations for this species.

**Habitat**: Reservoirs, ponds.

**Distr**. CP?, PD? (Baltimore?, Calvert?).

# Potamogeton zosteriformis Fernald

Flatstem Pondweed

G5

S1E

Potamogetonaceae (Pondweed Family)

State State Federal Global Common Name Rank Status Status Scientific Name Rank

Cons/Econote: Rare in the southeast and near the southern range limit (Virginia). Endangered by heavy siltation of Bay tributaries and perhaps competition/displacement by exotic species such as *Hydrilla*.

Habitat: Tidal freshwater aquatic beds, millpond on the Sassafras River.

**Distr**. CP, PD\* (Cecil, Montgomery\*).

Potentilla arguta Pursh

see Drymocallis arguta (Pursh) Rydberg

Prenanthes autumnalis Walter

see Nabalus autumnalis (Walter) Weakley

Primula meadia (Linnaeus) A.R. Mast & Reveal

Common Shootingstar

G5

S3

Primulaceae (Primrose Family)

Syn: Dodecatheon meadia Linnaeus

**Taxnote**: White-flowered forms occur sporadically in some populations and flower color varies from pink to blue hues.

Habitat: Calcareous seeps, upland woodlands over mafic (limestone, calcareous shale) substrates.

Distr. PD, RV (Allegany, Montgomery, Washington).

Flw: mid Apr-mid May; Fr: Jun.

# Prunus alleghaniensis Porter

Allegheny Plum

G4T4

S2

T

Rosaceae (Rose Family)

Syn: Prunus umbellata Elliott

**Taxnote**: Maryland plants are the Appalachian var. *alleghaniensis*. Treated broadly as *P. umbellata* by Rohrer (2014, FNA, v. 9).

Cons/Econote: Broadly Appalachian species, most frequent over the shale substrates of w. Washington and Allegany Counties in the Ridge and Valley. Once considered more or less a shale barren-restricted species; this concept supported by the distribution in Maryland but not regionally. Historical from a few stations in Cecil County (Piedmont) and apparently introduced at one location at Patuxent Wildlife Refuge in Anne Arundel County (Coastal Plain).

**Habitat**: Shale barrens and woodlands, shale outcrops along roadcuts and in clearings, often in habitats that have previously experienced heavy disturbance. Occurs over several shale formations but populations have also been found over Pocono sandstone and limestone. The unifying characteristic is open, sunny exposures where sunlight is not limiting.

**Distr**. CP<sup>I</sup>, PD\*, RV (Allegany, Anne Arundel<sup>I</sup>, Cecil\*, Washington).

Flw: late Apr-mid May; Fr: late May-Jun.

#### Prunus maritima Marshall

Beach Plum

G4

S1Ε

Rosaceae (Rose Family)

Cons/Econote: Endangered by habitat loss over the long term; many of our populations are doubtfully self-sustaining, these being small (often single shrubs) and isolated from other plants.

**Habitat**: Maritime dunes, beaches, sand spits.

Distr. CP (Anne Arundel, Calvert, Kent, St. Mary's, Worcester).

Flw: May; Fr: Jun-Jul (ripe by late July).

Prunus susquehanae Willdenow

Susquehanna Sandcherry G4

SH

Rosaceae (Rose Family)

Syn: P. pumila Linnaeus var. susquehanae (Willdenow) H. Jaeger

**Taxnote**: The taxonomic identity of several Maryland collections is uncertain.

Cons/Econote: Reported and/or collected rarely over the period 1895-1973.

**Habitat**: Reported generally as sandy and rocky barrens; in Maryland this encompasses bedrock scour bar terraces at Great Falls, pine barrens-like habitats along the Fall Line and according to Monteferrante (1973) serpentine barrens.

**Distr**. CP\*, PD\* (Baltimore\*, Montgomery\*, Prince George's\*).

#### Pseudolycopodiella caroliniana (Linnaeus) Holub

Carolina Clubmoss

G5

**S**1

Е

Lycopodiaceae (Clubmoss Family)

Syn: Lycopodium carolinianum Linnaeus

Lycopodiella caroliniana (Linnaeus) Pichi Sermolli

**Cons/Econote**: A single extant station. Historical stations in the vicinity of the District of Columbia, e.g., "magnolia bogs" sensu McAtee (1918) are presumed extirpated. McAvoy (2007) dismisses the oft-cited record from the Outer Coastal Plain (Worcester County).

Habitat: Sphagnous seeps.

**Distr**. CP (Harford, Prince George's\*).

Psoralea psoralioides (Walter) Cory

see Orbexilum psoralioides (Walter) Vincent

# Ptelea trifoliata Linnaeus

Common Hoptree

G5

**S**3

Rutaceae (Citrus Family)

Taxnote: Occurring in Maryland as both var. *trifoliata* and var. *mollis* Torrey and A. Gray. The latter requires more study and is not mapped separately by the Service.

**Cons/Econote**: An uncommon small tree/tall shrub. Its association with calcareous substrates is characteristic but the species also occurs in rich alluvium along the Potomac River as far east as Charles County (shell-marl).

**Habitat**: Rich woods, river bluffs and limestone woodlands.

Distr. CP, PD, RV (Allegany, Charles, Montgomery, Prince George's, Washington).

Ptilimnium nodosum (Rose) Mathias

see Harperella nodosa Rose

Pycnanthemum clinopodioides Torrey & A. Gray

**Basil Mountainmint** 

G1G2

SH

Lamiaceae (Mint Family)

**Taxnote**: A tetraploid species (2n = 4x = 38). *Pycnanthemum* species are very difficult to identify; hybridization, polyploidy and an euploidy contribute to taxonomic complexity in this genus.

**Cons/Econote**: This species prefers dry or moist rocky ground frequently over limestone or mafic substrates. These latter habitats are highly invasible, particularly by garlic mustard (*Alliaria petiolata*), Japanese honeysuckle (*Lonicera japonica*) and exotic woody honeysuckle (*L. maackii*).

**Habitat**: Historical specimens do not specify habitats.

**Distr**. PD\*, RV\* (Montgomery\*, Washington\*).

# Pycnanthemum pycnanthemoides (Leavenworth) Fernald

Southern Mountainmint

G5

SH :

X

Lamiaceae (Mint Family)

**Taxnote**: A tetraploid species (2n = 4x = 36). *Pycnanthemum* species are very difficult to identify; hybridization, polyploidy and an euploidy contribute to taxonomic complexity in this genus. This species and its varieties have generally been lumped with *P. incanum* and *P. loomisii* and its status and distribution relative to these congeners is unknown.

**Cons/Econote**: Represented by few Maryland collections, none of which have been confirmed.

**Habitat**: Rocky woodlands.

**Distr.** CP?, PD?\*, RV?\* (Baltimore?, Frederick?\*, Prince George's?).

#### Pycnanthemum torreyi Bentham

Torrey's Mountainmint

G2

S1

Е

Lamiaceae (Mint Family)

Syn: P. torrei, an orthographic variant.

**Taxnote**: A polyploid species with tetraploid (2n = 4x = 40) and hexaploid (2n = 6x = 60) numbers. *Pycnanthemum* species are very difficult to identify; hybridization, polyploidy, and an euploidy contribute to taxonomic complexity in this genus.

**Cons/Econote**: Endangered by habitat loss and now globally rare. Most populations in the northeastern U.S. are considered extirpated; thus Maryland's two extant populations are of rangewide significance. Block & Rhoads (2013) provide a valuable discussion of this species in the northeastern U.S.

Habitat: Open meadows and woodlands over ultramafic substrates.

Distr. PD, RV (Baltimore, Cecil?, Frederick, Howard\*, Montgomery\*).

Flw: early-mid Aug; Fr: Sept-Nov.

# Pycnanthemum verticillatum (Michaux) Persoon

Whorled Mountainmint

G5

S1 E

Lamiaceae (Mint Family)

**Taxnote**: A tetraploid species (2n = 4x = 39-40). One population in Baltimore County matches var. *pilosum* (Nuttall) Cooperrider and may warrant separate conservation rank. *Pycnanthemum* species are very difficult to identify; hybridization, polyploidy and aneuploidy contribute to taxonomic complexity in this genus.

**Cons/Econote**: Endangered by habitat loss, wetland conversion and displacement by invasive species. Plants occur in small isolated patches, frequently in or near seepage wetlands underlain by calcareous or mafic geological substrates including serpentine. However, the range of habitat types that may be adequate is unknown.

Habitat: Circumneutral seepage wetlands, dry to mesic calcareous meadows and glades.

**Distr**. AP\*, CP, PD, RV (Baltimore, Cecil, Carroll, Frederick, Garrett\*, Harford\*, Howard?, Montgomery\*, Prince George's\*, Queen Anne's).

Flw: late Jun-Jul (early Aug); Fr: Sept-Nov.

#### Pycnanthemum virginianum (Linnaeus) T. Durand & B.D. Jackson ex B.L. Robinson & Fernald

Virginia Mountainmint G5

**S**2

Lamiaceae (Mint Family)

**Taxnote**: A tetraploid species (2n = 4x = 40). *Pycnanthemum* species are very difficult to identify; hybridization, polyploidy and an euploidy contribute to taxonomic complexity in this genus.

Habitat: A variety of open, meadow-like habitats over a wide variety of geological substrates ranging from calcareous to acidic.

Distr. AP, PD, RV (Allegany, Baltimore, Cecil, Garrett, Harford, Howard\*, Montgomery\*, Washington).

Flw: Jul-early Aug; Fr: Sept-Nov.

#### Pyrola chlorantha Swartz

Green-flower Wintergreen G5

SH X

**S1S2** 

Ericaceae (Heath Family)

Syn: P. virens Schreb.

Cons/Econote: Historically collected from 1895-1940 from a narrow zone of pine barrens-like habitats.

Habitat: "pine woods"

**Distr**. CP\*, PD\* (Montgomery\*, Prince George's\*).

#### Quercus macrocarpa Michaux

Bur Oak, Mossycup Oak

G5

Fagaceae (Beech Family)

**Taxnote**: Hybridizes locally with *Q. bicolor* forming morphologically complex stands. Hybridization with *Q. alba* is also expected as a highly variable hybrid complex, with frequent backcrossing, occurs in the northeastern US and Canada (Whttimore & Schall 1991). **Cons/Econote**: Natural Maryland populations are comprised of small stands (often as single trees) as a consequence of long-term habitat loss and extensive habitat fragmentation. Pure stands of this species may not occur due to frequent hybridization. May occur as planted "specimen-trees" in some locations and the introduced distribution is very likely incomplete at the county level. The source of Shreve's (1910) report from Queen Anne's county—a conspicuous outlier—cannot be confirmed. The native range appears to be nw Carroll County west to Allegany County.

**Habitat**: Rich bottomland forests over calcareous shale and limestone; flood-scoured islands and bedrock terraces of the Potomac. **Distr**. CP<sup>I</sup>, PD, RV (Allegany, Baltimore<sup>I</sup>, Carroll\*, Frederick, Harford<sup>I</sup>, Montgomery, Prince George's<sup>I</sup>, Queen Anne's?, Washington).

# Scientific Name Common Name Rank Rank State State Federal Rank Quercus shumardii Buckley Shumard Oak G5 S2 T

Fagaceae (Beech Family)

**Cons/Econote**: Threatened by loss of bottomland hardwood forests, one of the most fragmented and heavily altered natural communities in Maryland.

**Habitat**: Rich bottomland forests, shell-marl ravine forests.

**Distr**. CP, PD, RV (Calvert, Charles, Frederick, Montgomery, Washington).

# Ranunculus allegheniensis Britton

Allegheny Mountains Buttercup G4G5

Ranunculaceae (Buttercup Family)

Habitat: Mesic hardwood slopes and coves, usually in base-rich soils.

Distr. AP (Garrett).

#### Ranunculus ambigens S. Watson!

Water-plantain Spearwort

G4

S1 X(PD)

**S**3

Ranunculaceae (Buttercup Family)

**Cons/Econote**: Numerous historical collections from the late 1890s to the early 1960s but now apparently scarce. Recent collections from Hunting Quarter Swamp in Montgomery County and a roadside wetland in Caroline County. Perhaps overlooked and the historical status of some counties in the distribution is likely due to lack of survey. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Floodplain mudbars and pools, tidal marshes.

**Distr**. CP, PD (Anne Arundel\*, Caroline, Cecil\*, Harford\*, Howard\*, Montgomery, Prince George's\*, Queen Anne's\*).

Flw: Jul; Fr: Aug.

#### Ranunculus carolinianus A.P. de Candolle!

Hispid Buttercup Carolina Buttercup G5

S1S3 X(PD)

Ranunculaceae (Buttercup Family)

Syn: R. hispidus Michaux var. nitidus (Chapman) T. Duncan

R. septentrionalis Poiret

**Taxnote**: According to Whitemore (1997) *R. septentrionalis* is often used as a synonym for var. *caricetorum* but the type specimen belongs to var. *nitidus*. No two floristic authors seem to treat this species in the same way.

**Cons/Econote**: Reported from numerous stations, most reflected confusion with *R. caricetorum*. A comparison of recently collected material resulted in four collections from Allegany, Frederick, and Garrett Counties, but the species may be expected in other rich sites on the Piedmont and Coastal Plain. Recently located in a large forested seep where the species was abundant. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Minerotrophic seeps, montane floodplain forests in rich soils.

Distr. AP, CP?, PD?, RV (Allegany, Baltimore?, Cecil?, Charles?, Frederick, Garrett).

Flw: mid May-early Jun; Fr: Jun

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Ranunculus fascicularis Muhlenberg ex Bigelow G5 Early Buttercup **S**1 E

Ranunculaceae (Buttercup Family)

Taxnote: Several collections labeled as this species appear to be R. acris and some specimens have not been confirmed.

Cons/Econote: Endangered by habitat loss.

**Habitat**: Thin, rocky soil of calcareous seeps and rich glades.

**Distr**. AP?, PD, RV\* (Howard, Garrett?, Washington\*).

#### Ranunculus flabellaris Rafinesque

Yellow Water Crowfoot

G5

S1E

Ranunculaceae (Buttercup Family)

Cons/Econote: Maryland stations scattered along the larger, more intact tracts of swamp and floodplain forest.

**Habitat**: Swamp forests, floodplain forests, in slow-moving water, e.g., pools, sloughs, canal bed (C&O).

**Distr.** CP, PD, RV (Anne Arundel, Frederick, Kent\*, Montgomery, Prince George's, Worcester\*).

#### Ranunculus hederaceus Linnaeus

Long-stalked Crowfoot

G5

S1

Ε

Ranunculaceae (Buttercup Family)

Cons/Econote: An oddly distributed circumboreal species with occurrences in North America and in Europe first recorded in North America (Carolina) by Bosc in 1821. The collection record from the Chesapeake Bay region documents the species at over 20 sites from the late 1800s to the late 1900s. Rediscovered by amateur botanist David Francis in 2006.

Habitat: Spring-fed seep.

**Distr**. CP\*, PD (Cecil, Charles\*, Prince George's\*).

Flw: Apr; Fr: May-Jun.

#### Ranunculus laxicaulis (Torrey & A. Gray) Darby

Mississippi Buttercup

G5?

**S**1

Ranunculaceae (Buttercup Family)

Cons/Econote: Before its rediscovery in 2006 this species was last documented in Maryland by Robert Tatnall in 1939. The current location (see below) is believed to be identical to Tatnall's collection site (Knapp et al. 2011). This species is widespread in the area and more exhaustive surveys could uncover additional populations.

**Habitat**: Exposed muddy tidal shores of the upper Pocomoke River and tributaries.

**Distr**. CP (Worcester).

### Ranunculus pensylvanicus Linnaeus f.

**Bristly Crowfoot** 

G5

SHX

Ranunculaceae (Buttercup Family)

Cons/Econote: Collected by W. R. Jones at Druid Hill Park according to Shreve et al. (1910). This site is the basis of several striking within-state disjuncts, particularly northern species (see *Coptis trifolia*).

**Habitat**: Wet meadows and floodplains (Weakley 2015).

**Distr**. PD\* (Baltimore\*).

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status G5 Ranunculus pusillus Poiret Pursh's Buttercup SU

Ranunculaceae (Buttercup Family)

Cons/Econote: According to Tatnall (1946) the range of the species on the Delmarva Peninsula is from the Susquehanna south to Talbot County. More records are expected and the species has "weedy" tendencies according to some reports.

**Habitat**: Floodplain swamps, pools, ditches.

**Distr**. CP, PD (Calvert, Caroline, Charles\*, Harford/Baltimore, Montgomery, Prince George's, Talbot\*).

Flw: late Apr-May; Fr. late May-Jun.

#### Ranunculus trichophyllus Chaix

Threadleaf Water Crowfoot G5T5

S1Ε

Ranunculaceae (Buttercup Family)

Northeastern White Water Crowfoot

**Taxnote**: Maryland plants are var. *trichophyllus*.

**Cons/Econote**: The species is circumboreal, occurring at its southern range limits in Maryland.

**Habitat**: Freshwater marsh in peaty soil.

Distr. CP (Kent).

#### Rhamnus alnifolia L'Héritier

Alderleaf Buckthorn

G5

**S**1

Rhamnaceae (Buckthorn Family)

Cons/Econote: New to the flora in 2009 (see Knapp et al. 2011). Discovered by accident and with few confirmed details, this species abundance and conservation status has yet to be confidently established. Interestingly, this species is enumerated in Aikin's (1837) catalogue of plants from the vicinity of Baltimore but the only species listed by Shreve (1910), who apparently studied this catalogue, was the European *R. alnus (frangula)*.

Habitat: Mountain peatland.

**Distr**. AP (Garrett).

#### Rhododendron arborescens (Pursh) Torrey

Smooth Azalea

G4G5

**S**3

Ericaceae (Heath Family)

**Cons/Econote**: Chiefly Appalachian and occurring in Maryland near its northern range limit.

Habitat: Montane hardwood forests, often along riparian zones.

**Distr**. AP, RV\* (Allegany\*, Garrett).

**Flw**: mid-late Jun-early Jul; **Fr**: Aug-Nov.

#### Rhynchosia tomentosa (Linnaeus) Hooker & Arnott

Hairy Snoutbean

G5

S2T

Fabaceae (Legume Family)

Cons/Econote: Threatened by habitat loss, poor protection status, low population size and lack of appropriate management. Interestingly, this species quickly responded to prescribed fire management at one site, appearing robustly in the new habitat (apparently from the seed bed).

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Habitat**: Inland sand dune and ridge forests, in dry sandy soils.

**Distr**. CP (Anne Arundel, Caroline, Calvert, Dorchester, Wicomico, Worcester).

Flw: mid Jul-early Sept; Fr: Sept-Oct.

Rhynchospora alba (Linnaeus) Vahl

Cyperaceae (Sedge Family)

White Beakrush

G5

**S**3

Cons/Econote: A characteristic species of sphagnous wetlands, locally abundant in mountain peatlands, scattered and isolated on the Coastal Plain.

**Habitat**: Mountain peatlands, coastal "bogs" and acidic seepage wetlands in peaty soils.

Distr. AP, CP (Anne Arundel, Baltimore, Cecil, Charles, Prince George's, Wicomico, Worcester).

Rhynchospora cephalantha A. Gray

Capitate Beakrush

G5

Ε

**S**1

Cyperaceae (Sedge Family)

**Taxnote**: Maryland records may contain specimens referable to *R. cephalantha var. attenuata* Gale.

Cons/Econote: Endangered by habitat loss, fire exclusion, and woody succession of open meadow-like habitat.

**Habitat**: Delmarva Bays and other seasonally flooded depressional wetlands, wet pine flatwoods.

**Distr**. CP (Anne Arundel?, Baltimore?, Dorchester, Prince George's, Worcester).

Rhynchospora globularis (Chapman) Small

Globe Beakrush

G5?T5?

**S**1

Ε

Cyperaceae (Sedge Family)

Cons/Econote: Maryland stations for this plant occur near the northern limits of the species' range. An early successional species, intolerant of shade, all sites require management to maintain open habitat. Fire suppression may play a role in this species' rarity.

**Habitat**: Seasonally saturated open meadows and swales in sandy or peaty soils, often under powerlines or along roadsides.

Distr. CP (Anne Arundel?, Wicomico, Worcester).

Rhynchospora glomerata (Linnaeus) Vahl

Clustered Beakrush

G5T5?

S3

Cyperaceae (Sedge Family)

**Taxnote**: Maryland plants are var. *glomerata*.

**Habitat**: Pine flatwoods, powerline and roadside swales and meadows, in seasonally saturated sandy soils.

**Distr**. CP (Calvert, Prince George's\*, Somerset, St. Mary's, Wicomico, Worcester).

Rhynchospora harperi Small

Harper's Beakrush

G4?

S1

Ε

Cyperaceae (Sedge Family)

Cons/Econote: Endangered by habitat loss, fire exclusion, and woody succession of open meadow habitat.

State State Federal Global Scientific Name Common Name Rank Rank Status Status

**Habitat**: Sandy/peaty soils in flatwoods depressions that are at least seasonally saturated and additionally restricted to open canopy wetlands.

**Distr**. CP (Dorchester, Wicomico, Worcester).

#### Rhynchospora inundata (Oakes) Fernald

**Drowned Hornrush** 

G4?

S1Ε

Cyperaceae (Sedge Family)

Cons/Econote: The few Maryland stations occur in Delmarva Bays (Fenstermacher et al. 2014) that are some of the largest in the State, presumably having a longer hydroperiod.

Habitat: Delmarva Bays and acidic seepage fens.

Distr. CP (Dorchester, Wicomico).

#### Rhynchospora microcephala (Britton) Britton ex Small

Small-headed Beakrush

G5

**S**2

Cyperaceae (Sedge Family)

Syn: R. cephalantha A. Gray var. microcephala (Britton) Kükenthal

Cons/Econote: Declining. Nearly all Maryland stations are located in early successional openings in an otherwise forested landscape.

This may be attributable to a spate of harvesting on former Chesapeake Forest Products lands (now largely state-owned) during the 1990s.

As these harvest areas have been replanted or have succeeded into forest/shrub lands, habitat for this species has become more limited.

**Habitat**: Open sandy meadows and powerline swales.

**Distr**. CP (Caroline, Prince George's, Wicomico, Worcester).

## Rhynchospora nitens (Vahl) A. Gray

Short-beaked Baldrush

G4?

G4

S1

Ε

Cyperaceae (Sedge Family)

Syn: Psilocarya nitens (Vahl) Wood

Cons/Econote: Maryland stations constitute a few small populations scattered across the Eastern Shore. Occurrences may be ephemeral, disappearing upon canopy closure but perhaps persisting in the seed bank.

Habitat: Permanently saturated coastal wetlands including millponds (floating sphagnous mats), flooded sandpits, Delmarva Bays and acidic seeps.

Distr. CP (Dorchester, Wicomico).

### Rhynchospora oligantha A. Gray

Feather-bristle Beaksedge

SH X

Cyperaceae (Sedge Family)

Few-flowered Beakrush

Cons/Econote: Historical collections from Suitland Bog made in the early 1950s.

**Habitat**: Open, gravelly seepage bog; a "magnolia bog" sensu McAtee (1918). Presumed extirpated (Strong & Simmons 2002).

**Distr**. CP\* (Prince George's\*).

#### State State Federal Global Scientific Name Rank Rank Status Status Common Name Rhynchospora pallida M.A. Curtis G3 X Pale Beakrush SH

Cyperaceae (Sedge Family)

Cons/Econote: Collected by W. Canby from "near Salisbury" in 1880 (Gale 1944). This location is a recurring theme in the historical flora of Maryland. Presumably a pine barrens-like site, now extirpated.

**Habitat**: The area around Salisbury historically comprised a vast area of inland sand dunes and stream-head peaty fens dotted with large depressions (visible on high resolution, false color aerial images). These depressions may have been nontidal Atlantic White Cedar (Chaemacyparis thyoides) swamps.

**Distr**. CP\* (Wicomico\*).

#### Rhynchospora rariflora (Michaux) Elliott!

Few-flowered Beakrush

G5

SU X

Cyperaceae (Sedge Family)

Cons/Econote: Prior to Knapp locating this species at Suitland Bog the species was known from a single collection by J.B.S. Norton from a "sphagnum bog" in Wicomico County from 1940. The Suitland Bog station is possibly an introduction, see Knapp et al. (2011) for discussion. Conservation rank and legal status under review.

**Habitat**: "Sphagnum bog" (Norton), gravelly seepage bog (Knapp).

**Distr**. CP (Prince George's, Wicomico\*).

#### Rhynchospora recognita (Gale) Kral

Cymose Beakrush

G5?

S2

Cyperaceae (Sedge Family)

Syn: R. globularis (Chapman) Small var. recognita Gale

Cons/Econote: A species historically confused with R. glomerata but occurring in a wider variety of open habitats. Its rarity is likely due to absence of recurrent fire.

**Habitat**: Clearings and edges of pine flatwoods, open sandy swales, dry glades and riverside scour bar glades.

**Distr**. CP, PD (Cecil, Dorchester, Harford, Montgomery, Prince George's\*, Worcester).

## Rhynchospora scirpoides (Torrey) Grisebach

Long-beaked Baldrush

G4

**S**2

Τ

Cyperaceae (Sedge Family)

**Syn**: *Psilocarya scirpoides* Torrey

**Cons/Econote**: Alterations to historical patterns of groundwater hydrology pose a severe and persistent threat. Additionally, exotic species such as the Eurasian rough-seed bulrush (Schoenoplectiella mucronata) and perhaps even some aggressive natives such as Walter's sedge (Carex striata) and red maple (Acer rubrum) may invade the habitat preferred by this species in Delmarva Bays.

**Habitat**: Delmarva Bays and acidic seepage fens.

**Distr**. CP (Caroline, Dorchester, Kent, Wicomico).

#### Rhynchospora torreyana A. Gray

Torrey's Beakrush

G4

**S**2

T

Cyperaceae (Sedge Family)

Scientific Name Global State State Federal Rank Rank Status Status

Cons/Econote: Threatened by woody succession of open habitats and suburban sprawl.

**Habitat**: Pine flatwoods, open meadows, powerline swales and road verges in seasonally saturated sandy or peaty soils.

Distr. CP (Caroline, Dorchester, Wicomico, Worcester).

Ribes americanum P. Miller

Wild Black Currant

G5

S1 X

Grossulariaceae (Currant Family)

**Cons/Econote**: Near its southern range limit (VA); the species was last collected by J.B.S. Norton in 1902 until rediscovered by Coleman Minnie at a site in Frederick County. Riefner & Hill (1983) discuss this species in a regional context. The Service is reviewing this species' State Status, but have not formulated a proposal for listing.

Habitat: Rich woods.

**Distr**. PD\*, RV (Carroll\*, Frederick).

Flw: mid-late Apr; Fr:

Ribes cynosbati Linnaeus

Prickly Gooseberry

G5

**S**3

Grossulariaceae (Currant Family)

**Cons/Econote**: According to Shreve (1910, p. 282) this species was a characteristic shrub of mountain forests dominated by chestnut (*Castanea dentata*) and chestnut oak (*Quercus montana*).

Habitat: Rich woods, often over calcareous (limestone) substrates and at least historically, sandstone boulderfields at high elevations.

Distr. AP, CP, RV (Allegany, Frederick, Garrett, Prince George's, Washington).

Ribes glandulosum Grauer

Skunk Currant

G5

**S**3

Grossulariaceae (Currant Family)

**Habitat**: Montane (high elevation) seeps in northern hardwoods.

Distr. AP, RV (Frederick, Garrett).

Rosa blanda Aiton

Smooth Rose

G5

S1 E

Rosaceae (Rose Family)

**Cons/Econote**: A rare species of mountain forests near its southern range limit (WV); presumably a single Maryland station.

Habitat: Riverside scour bar.

Distr. AP (Garrett).

Rudbeckia fulgida Aiton

Orange Coneflower

G5

**S**3

Asteraceae (Aster Family)

**Taxnote**: A complex group of geographic and habitat-defined varieties, five of which occur in adjacent states. Only var. *fulgida* is reported from Maryland in Flora North America (v. 21).

**Cons/Econote**: Herbarium and field study is needed to revise the State rank.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

Habitat: Meadows, forest edges in dry to moist soil.

Distr. AP, CP\*, PD, RV (Allegany, Baltimore, Frederick, Garrett, Montgomery, Prince George's\*).

#### Rudbeckia triloba Linnaeus

Brown-eyed Susan

G5T4T5

**S**3

Asteraceae (Aster Family)

**Taxnote**: Maryland plants are var. *triloba*.

**Cons/Econote**: The original range may be obscured by planted material; several populations persist around old homesites and plants regarded as "garden escapes" by collectors and from roadsides (Talbot) may in fact be introductions. The State rank needs a thorough review.

Habitat: Fields, rich floodplains, roadsides and other clearings.

Distr. AP, CP, PD, RV (Allegany, Baltimore, Frederick, Garrett, Harford, Montgomery, Talbot, Washington).

#### Ruellia humilis Nuttall

Hairy Wild Petunia

G5

S1 E

Acanthaceae (Acanthus Family)

**Cons/Econote**: Maryland stations comprising a few small populations (10-30 plants on average) along the Potomac River. Endangered by habitat loss and competition with exotic species.

Habitat: Bedrock terrace woodland and flatrock scour in sandy alluvium.

Distr. PD, RV (Montgomery, Washington).

Flw: Jul-Aug.; Fr: Aug-Sept.

#### Ruellia purshiana Fernald

Pursh's Wild Petunia

G3

S1 E

Acanthaceae (Acanthus Family)

**Cons/Econote**: A single station, endangered by encroaching exotic woody shrubs and vines (e.g., *Lonicera maackii*, *L. japonica*, *Rosa multiflora*).

**Habitat**: Calcareous shale/siltstone outcrops (along roadside).

**Distr**. PD (Montgomery). **Flw**: June; **Fr**: Jul-Aug.

#### Ruellia strepens Linnaeus

Limestone Wild Petunia

G4G5

**S2S3** 

Acanthaceae (Acanthus Family)

**Cons/Econote**: The major threat to this species is invasion of floodplain forest communities along the Potomac River by Japanese knotweed (*Reynoutria japonica*). For example, *R. japonica* anchors the sediments that would normally be re-sorted and distributed during flood events and forms a dense understory canopy, typically excluding any other herbaceous species. Additional threats may be posed by western beakgrain (*Diarrhena obovata*), a species capable of forming a dense ground layer and that is extremely competitive.

**Habitat**: *R. strepens* occurs in rich bottomland forests with the majority of records from areas with limestone; however, the species does not seem particularly restricted to limestone, rather rich alluvial soils.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Distr**. CP\*, PD, RV (Allegany, Baltimore/Howard, Cecil\*, Frederick, Kent\*, Montgomery, Washington).

Flw: mid Jun-mid Jul.; Fr: Aug-Sept.

Rumex altissimus A. Wood

Tall Dock

G5

S1 E

Polygonaceae (Smartweed Family)

**Cons/Econote**: Stations for this plant are scattered along major rivers in Maryland. Its demography is extremely variable because the riparian habitats are not stable or long-persisting.

**Habitat**: Frequently flooded zones along rivers in sandy/gravelly alluvium; also forested wetlands in muck soils.

Distr. CP, PD, RV (Cecil, Charles\*, Frederick\*, Kent, Montgomery, Washington).

Flw: May-Jun (July); Fr: Aug.

Sabatia campanulata (Linnaeus) Torrey

Slender Marsh Pink

G5

S1 E

Gentianaceae (Gentian Family)

**Cons/Econote**: Endangered by habitat loss and fire exclusion; a species of pine savannas and bogs in the southern U.S.; Maryland stations represent remnant populations in a highly altered ecosystem.

Habitat: Delmarva Bays and other wet meadow or barrens-like openings (often powerlines).

Distr. CP (Dorchester, Wicomico, Worcester).

Flw: mid Jul-Aug; Fr: Sept.

Gentianaceae (Gentian Family)

Sabatia difformis (Linnaeus) Druce

Two-formed Pink

G4G5

S1 E

**Cons/Econote**: Endangered by woody succession of bay habitat, alteration of groundwater hydrology and to some extent by illegal off-road vehicle use.

Habitat: Delmarva Bays.

**Distr**. CP (Dorchester, Worcester). **Flw**: mid Jul-early Aug.; **Fr**: Sept.

Sabatia dodecandra (Linnaeus) Britton, Sterns, & Poggenburg Large Marsh Pink

G5?

**S**3

Gentianaceae (Gentian Family)

**Habitat**: Fresh tidal to brackish marshes, marsh/maritime shrub and forest ecotones.

Distr. CP (Anne Arundel, Baltimore, Cecil, Charles\*, Dorchester, Harford, Wicomico, Worcester).

Flw: mid-late Jul-Sept. Fr: Oct.

Saccharum alopecuroides (Linnaeus) Nuttall

Silver Plume Grass

G5

**S**1?

Poaceae (Grass Family)

Syn: Erianthus alopecuroides (L.) Elliott

State State Federal Global Common Name Rank Status Status Scientific Name Rank

**Taxnote**: Several orthographic variants of the specific epithet are in the taxonomic literature including "alopecuroideum" and

"alopecuroidum". Welker et al. (2015) found no molecular support for segregating the genus Erianthus.

Cons/Econote: Maryland populations are near the northern range limit for this narrowly distributed southeastern species; the conservation rank lacks precision due to the limited amount of field work on the genus.

**Habitat**: Meadows and roadsides. **Distr**. CP, PD (Calvert, Howard).

#### Saccharum baldwinii Sprengel

Slender Plume Grass

G5

S1

E

Poaceae (Grass Family)

Syn: Erianthus strictus Elliott

Cons/Econote: Maryland populations are the northernmost in the range of this narrowly distributed southeastern species. There are two relictual populations on the Eastern Shore. Welker et al. (2015) found no molecular support for segregating the genus *Erianthus*.

**Habitat**: Wet meadows and powerline swales.

Distr. CP (Wicomico, Worcester).

**Flw/Fr**: mid Sept-early Oct.

#### Saccharum contortum (Elliott) Nuttall

Bent-awn Plume Grass

G5

**S3S4** 

Poaceae (Grass Family)

Syn: S. brevibarbe (Michx.) Persoon var. contortum (Elliott) R. Webster

Erianthus brevibarbis Michaux var. contortus (Elliott) D.B. Ward

Erianthus contortus Elliott

**Taxnote**: Maryland records for S. brevibarbe (Michaux) Persoon derives from nomenclatural confusion and this southern species does not occur in Maryland. Welker et al. (2015) found no molecular support for segregating the genus *Erianthus*.

**Habitat**: Sandy roadsides, inland sand dunes, railroad verges, powerlines and field edges.

**Distr.** CP (Caroline, Charles, Dorchester, Somerset, Wicomico, Worcester).

Flw/Fr: late Aug-early Oct.

#### Sacciolepis striata (Linnaeus) Nash

Gibbous Panic-grass

G5

Е

**S**1

Poaceae (Grass Family)

Cons/Econote: Restricted to narrow zones or ecotones of emergent marsh and endangered by habitat loss. Many populations will be affected by increases in salinity from sea level rise.

**Habitat**: Fresh to oligonaline marshes.

**Distr**. CP (Charles, Wicomico, Worcester).

Flw/Fr: mid Aug-late Sept.

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status Sagittaria engelmanniana J.G.Smith Engelmann's Arrowhead G5? T S2

Alismataceae (Water-plantain Family)

Cons/Econote: Threatened by alteration of groundwater hydrology, herbicide use and woody succession of open wetland habitat.

**Habitat**: Delmarva Bays; lake shorelines in the mountains; acidic seepage swamps and boggy areas, often under powerlines.

Distr. AP. CP. PD\* (Calvert, Caroline, Charles, Garrett, Montgomery\*, Prince George's\*, Queen Anne's, Somerset, Wicomico, Worcester).

## Sagittaria graminea Michaux

Grassleaf Arrowhead

G5

SU

Alismataceae (Water-plantain Family)

Cons/Econote: The distribution and conservation rank for this species has not been confidently established. Our few records suggest rarity; however, the distribution is provisional and many specimen records need confirmation.

**Habitat**: Delmarva Bays, ditches, beaver ponds, intertidal marshes and mudflats.

**Distr.** AP, CP (Caroline, Cecil, Charles, Dorchester, Garrett, Kent, Queen Anne's, Wicomico, Worcester).

Flw: Aug; Fr: Sept-Oct.

#### Sagittaria rigida Pursh

Sessile-fruit Arrowhead

G5

**S**1

Ε

Alismataceae (Water-plantain Family)

Cons/Econote: Regionally rare and with a primarily Appalachian distribution south of Maryland, the coastal station is a disjunct and our historical records are presumed extirpated.

Habitat: Delmarva Bays; historical habitats may have included vernal pools and meadows in the Piedmont, and Ridge and Valley.

**Distr**. CP, PD\*, RV (Allegany, Frederick\*, Montgomery\*, Prince George's\*, Worcester).

Flw: Jul-Sept; Fr: Sept-Oct.

#### Sagittaria spatulata (J.G. Smith) Buchenau

Spongy Arrowhead Tidal Arrowhead

G5

**S**2

**Syn**: *S. spathulata*, an orthographic variant.

S. calycina var. spongiosa Engelmann

Alismataceae (Water-plantain Family)

S. montevidensis Chamisso & Schlechtendal ssp. spongiosa (Engelmann) Bogin

Lophotocarpus spongiosus (Engelmann) J.G. Smith

**Taxnote**: Historically the Service has listed S. calycina, in the broad sense, comprised of both var. spongiosa and var. calycina. Some Maryland material may be referable to S. calycina Engelmann (= S. calycina var. calycina) in the strict sense; distributions of these taxa have yet to be determined.

Cons/Econote: One of many intertidal zone plants that are suspected of being under decline, presumably due to sea level rise but also by eutrophication and siltation of habitats along tributaries of the Chesapeake Bay.

**Habitat**: Sandy/gravelly intertidal zones.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

Distr. CP (Anne Arundel, Baltimore, Cecil, Charles, Dorchester, Harford, Kent, Wicomico).

Flw: Jun-Aug (Sept); Fr: Aug-Oct.

#### Sagittaria subulata (Linnaeus) Buchenau

Strap-leaf Arrowhead

G4

SU

Alismataceae (Water-plantain Family)

**Cons/Econote**: One of many intertidal zone plants that were suspected of being under decline, presumably due to sea level rise but also by boat wakes, eutrophication and siltation of intertidal habitats along tributaries of the Chesapeake Bay. Recent surveys suggest that this species may be one of the more resilient intertidal species (J. Harrison).

Habitat: Sandy or gravelly intertidal zones, tidal mudflats and rarely (?) exposed gravel bars along streambanks.

Distr. CP, RV (Allegany, Baltimore\*, Caroline, Cecil, Charles\*, Harford\*, Washington, Wicomico, Worcester).

Flw: Aug-Sept (Nov); Fr: Sept-Nov.

#### Salix bebbiana Sargent

Bebb's Willow

G5

SH X

Salicaceae (Willow Family)

**Cons/Econote**: Barely entering the southeast in Maryland (occurs in the southwestern U.S.). Documented for the flora by two historical collections (see Argus 1986).

**Habitat**: Upland thickets and barrens.

**Distr**. PD\* (Baltimore\*, Cecil\*).

#### Salix caroliniana Michaux

Carolina Willow

G5

**S**3

Salicaceae (Willow Family)

**Habitat**: Scour and depositional bars along rivers, riverbanks, flood channels.

Distr. CP, PD, RV (Allegany, Frederick, Montgomery, Washington, Wicomico, Worcester; distribution likely incomplete).

#### Salix discolor Muhlenberg

**Pussy Willow** 

G5

SH

Salicaceae (Willow Family)

**Cons/Econote**: At its southern range limits in Maryland this species is documented in the flora by two historical collections (Argus 1986). Additional collections from Cecil County cited by Tatnall (1946) were not noted by Argus (1986); these seem likely (given the extent of serpentine and ultramafic barrens and woodlands) but are unconfirmed.

Habitat: Calcareous wetlands; the Service is uncertain of the Maryland-specific habitats.

**Distr**. AP\*, PD\* (Baltimore\*, Cecil?, Garrett\*).

#### Salix exigua Nuttall

Narrowleaf Willow

G5

S1 E

Salicaceae (Willow Family)

Syn: S. interior Rowlee

S. exigua Nuttall ssp. interior (Rowlee) Cronquist

Global State State Federal Scientific Name Common Name Rank Status Status Rank

Taxnote: Maryland plants are the eastern, var. sericans (Nees) G.L. Nesom

Cons/Econote: Occurring in Maryland in diffuse populations, these generally small, often just a few individuals. Capable of forming nearly continuous colonies in good habitat. Some Chesapeake Bay stations have been locally extirpated due to shoreline erosion, whereas others have expanded. There are multiple reports (see Distr. below) but few confirmed extant stations.

**Habitat**: Beaches, shorelines, and sand spits along the Chesapeake Bay and larger tributaries that are infrequently inundated by tides. Rocky scour bars and scrub-woodlands along the Potomac River.

**Distr**. AP?, CP, PD\*, RV\* (Allegany?, Cecil, Charles?, Frederick\*, Garrett?, Kent, Montgomery\*, Prince George's).

#### Salix lucida Muhlenberg

**Shining Willow** 

G5

SH

X

Salicaceae (Willow Family)

Cons/Econote: A northern species occurring mainly in previously glaciated regions and occurring regionally (DE, MD, WV) as peripheral disjuncts. Our records represented relictual occurrences of a Pleistocene distribution.

**Habitat**: Streambanks and low ground.

**Distr**. AP\*, PD\* (Cecil\*, Garrett\*).

#### Salix occidentalis Walter

Dwarf Prairie Willow

G5

S2

Salicaceae (Willow Family)

Syn: S. humilis Marshall var. tristis (Aiton) Griggs

S. humilis Marshall var. microphylla (Andersson) Fernald

S. tristis Aiton

**Taxnote**: Often treated as a variety of the widespread S. humilis, and fully sympatric with that species; some Maryland records are likely S. humilis s.s.

Cons/Econote: Within Maryland there are two centers of occurrence; the Piedmont stations occur in areas having ultramafic substrates and serpentine barrens, whereas the Coastal Plain stations appear clustered in southern Maryland, roughly corresponding to the Aquia formation—a zone of glauconitic sands (greensands) containing higher levels of calcium and magnesium (Chapelle & Knobel 1983). Habitat: Meadows, woodlands and barrens (savannas).

Distr. AP?, CP\*, PD, RV (Allegany, Anne Arundel\*, Baltimore\*, Cecil, Charles\*, Garrett?, Harford\*, Howard\*, Montgomery\*, Prince George's\*).

### Salvia urticifolia Linnaeus

Nettleleaf Sage

G5

X SX

Lamiaceae (Mint Family)

Cons/Econote: Known only from the colonial-era (Maryland) collections of Vernon & Krieg circa 1698 (see Brown et al. 1987).

**Habitat**: Woodlands and glades, usually over mafic or calcareous rocks (Weakley 2015).

**Distr.** Unknown, a southeastern species (FL, GA, NC, SC, VA).

# Scientific Name Common Name Rank Rank State State Federal Rank Status Status

Rosaceae (Rose Family)

**Cons/Econote**: Threatened over the long term by extensive habitat loss and in the near term primarily by woody succession of open-meadow habitat and additionally by several invasive shrubs, particularly encroaching *Rosa multiflora*. Maryland populations have poor protection status but agreements with private landowners for management have been successful at several locations.

Habitat: Open wet meadows, seepage slopes, often (but not always) over mafic or ultramafic substrates.

Distr. AP, CP\*, PD, RV (Baltimore, Carroll, Cecil, Frederick, Garrett, Harford, Montomery, Prince George's\*).

Flw: late Aug-Sept; Fr: Oct.

#### Sanicula marilandica Linnaeus

Maryland Black-snakeroot G5

**S**3

Apiaceae (Carrot Family)

**Habitat**: Mesic to dry forests and woodlands, usually in soils weathered from mafic or calcareous rocks, or from shell deposits on the Coastal Plain.

Distr. AP, PD, RV (Allegany, Baltimore, Garrett, Washington).

#### Sanicula trifoliata Bicknell

Large-fruited Sanicle

**S**3

Apiaceae (Carrot Family)

**Habitat**: Rich, mesic cove and slope forests, dry-mesic oak-hickory forests on mafic or calcareous substrates, rich northern hardwood forests.

Distr. PD, RV (Cecil, Frederick, Harford).

Flw: May (?); Fr: mid Jun.

#### Sarracenia purpurea Linnaeus

Northern Pitcherplant

G5

G4

S2 T

Sarraceniaceae (Pitcherplant Family)

**Cons/Econote**: Threatened by habitat loss. Declines are noted for some populations due to beaver activity whereas other populations are threatened by encroaching woody vegetation. For example, the Wicomico County millpond photographs of A.V. P. Smith (1938) are striking in that the habitat area was expansive (Salisbury Pond, 40 acres; Sharptown Pond, 15 acres) as was the area occupied by *Sarracenia* at the latter two ponds ("abundant" at Salisbury Pond, "common" at Sharptown Pond). The native range in Maryland is obscured by a number of known or suspected introductions.

**Habitat**: Streamside fens, acidic seepage wetlands, millponds.

**Distr**. AP<sup>I</sup>, CP, RV (Anne Arundel, Charles, Dorchester, Frederick, Garrett<sup>I</sup>, Prince George's, St. Mary's<sup>I</sup>, Wicomico, Worcester). **Flw**: mid May-Jun; **Fr**: Aug-Sept.

Saxifraga micranthidifolia (Haworth) Steudel

see Micranthes micranthidifolia (Haworth) Small

State State Federal Global Scientific Name Common Name Rank Rank Status Status Sceptridium multifidum (S.G. Gmelin) M. Nishida Leathery Grapefern G5 X SH Ophioglossaceae (Adder's-tongue Family) Syn: Botrychium multifidum (S.G. Gmelin) Treviranus B. multifidum var. intermedium (D.C. Eaton) Farwell Cons/Econote: Redman (1991) reported a single station in Baltimore County that has been apparently extirpated. Habitat: Mesic forests. **Distr**. PD\* (Baltimore\*). Sceptridium oneidense (Gilbert) Holub Blunt-lobe Grapefern G4 S1Ε Ophioglossaceae (Adder's-tongue Family) Svn: Botrychium oneidense (Gilbert) House Cons/Econote: Endangered by habitat loss. **Habitat**: Headwater seeps and swampy floodplain forests. **Distr**. AP, CP\*, RV? (Dorchester\*, Frederick?, Garrett, St. Mary's\*, Worcester). Schizachne purpurascens (Torrey) Swallen Purple Oat G5 **S**1 Ε Poaceae (Grass Family) Cons/Econote: Geographically restricted and nearing the southern range limit (VA), Maryland populations are small and vulnerable to local extirpation under a variety of scenarios. **Habitat**: Mesic northern hardwood forests, often rocky or among sandstone boulders. Distr. AP (Garrett). Flw/Fr: early Jun. Schoenoplectus etuberculatus (Steudel) Soják Canby's Bulrush G3G4 SHX Cyperaceae (Sedge Family) Syn: Scirpus etuberculatus (Steudel) Kuntze Cons/Econote: Historically collected in the vicinity of Salisbury from 1863-1906. The last known population has not been seen since 1982. **Habitat**: Slow-moving blackwater streams, peaty streamhead depressions. **Distr**. CP\* (Wicomico\*). **S**2 Schoenoplectus novae-angliae (Britton) M.T. Strong Salt-marsh Bulrush G5 Cyperaceae (Sedge Family) Syn: Bolboschoenus novae-angliae (Britton) S.G. Smith Bolboschoenus x novae-angliae (Britton) S.G. Smith

Scirpus cylindricus (Torrey) Britton

Global State State Federal Scientific Name Common Name Rank Status Status Rank

*S. novae-angliae* Britton

S. subterminalis var. cylindricus (Torrey) T. Koyama

**Taxnote**: Treated in some manuals as a hybrid (Sch. fluviatilis x Sch. robustus). Taxonomy is uncertain; some authors place the species in the genus Bolboshoenus Palla.

**Habitat**: Fresh to brackish tidal marshes, often locally abundant.

**Distr.** CP (Anne Arundel, Caroline, Cecil, Dorchester?, Harford, Kent, Prince George's, Talbot, Worcester; distribution likely incomplete).

#### Schoenoplectus smithii (A. Gray) Soják

Smith's Bulrush

G5?

SH X

Cyperaceae (Sedge Family)

Svn: Scirpus smithii A. Gray

Taxnote: Subspecific taxa include var. smithii, var. setosus (Fernald) S.G. Smith and var. levisetus (Fernald) S.G. Smith; however the taxonomic status of the three varieties is uncertain. Our only confirmed record is var. setosus. Often misattributed due to taxonomic confusion with Sch. purshii.

Cons/Econote: The Service can only speculate that the reason the species has not been collected in recent decades is that the species occupies a specific habitat, which is either under-surveyed or so altered that the species is no longer present in Maryland.

Habitat: Coastal ponds and gravelly stream margins.

**Distr**. CP\*, PD? (Anne Arundel\*, Baltimore?, Montgomery?, Prince George's\*, Wicomico\*).

#### Schoenoplectus subterminalis (Torrey) Soják

Water Bulrush

G4G5

**S**1

Е

Cyperaceae (Sedge Family)

Syn: Scirpus subterminalis Torrey

Cons/Econote: Available habitat for this species has been historically heavily altered by stream sedimentation, channelization and eutrophication.

**Habitat**: Ponds and blackwater streams.

**Distr**. CP, RV (Anne Arundel\*, Dorchester, Frederick, Wicomico).

#### Schoenoplectus torrevi (Olney) Palla

Torrey's Bulrush

G5

**S**1

Cyperaceae (Sedge Family)

Syn: Scirpus torreyi Olney

Cons/Econote: Reported from Cecil County by Witman (1954) but without a corresponding specimen and otherwise doubtful. The first extant record for this species was discovered (at the opposite end of the state) by W. Knapp in 2013.

**Habitat**: Pond edge within a mountain peatland.

Distr. AP (Garrett).

#### State State Federal Global Scientific Name Common Name Rank Status Status Rank Schwalbea americana Linnaeus SH X LE Chaffseed G2G3

Orobanchaceae (Broomrape Family)

Syn: S. australis Pennell

S. americana L. var. australis (Pennell) Reveal & C.R. Broome

Cons/Econote: The species is a component of fire-dependent coastal ecosystems (Norden and Kirkman 2004) which are no longer present in Maryland. Maryland specimens from the 1690s are present at the British Museum (Reveal et al. 1987, p. 222). This species is now extirpated over much of its historic range in the eastern U.S. Misattributed to Wicomico County by Brown & Brown (1984).

Habitat: Sandy barrens and savannas in moist soil.

**Distr**. CP\* (Anne Arundel?, Worcester\*).

### Scirpus ancistrochaetus Schulver

Northeastern Bulrush

G3

**S**1 Ε LE

Cyperaceae (Sedge Family)

Cons/Econote: Restricted in Maryland to a single station. See Bartgis (1992) for information on Maryland occurrences and Cipollini & Cipollini (2011) and Cipollini et al. (2013) for rangewide perspectives.

**Habitat**: Sinkhole ponds. **Distr**. RV (Washington). Flw/Fr: mid Jun-Jul.

#### Scirpus expansus Fernald

Woodland Bulrush

**G**4

**S**3

Cyperaceae (Sedge Family)

Habitat: Rocky streambanks and gravel bars.

Distr. AP, CP?, PD, RV (Allegany, Baltimore, Cecil, Garrett, Prince George's?, Washington).

**Flw/Fr**: mid Jul-Aug.

#### Scirpus hattorianus Makino

Mosquito Bulrush

G5

SU

Cyperaceae (Sedge Family)

Cons/Econote: Rare in adjacent states and likely narrowly distributed in central and western Maryland. There is not enough information to confidently assign a conservation rank.

**Habitat**: Wet meadows and acidic seeps.

**Distr**. AP, PD? (Baltimore?, Carroll?, Garrett).

Flw/Fr: Jul.

#### Scleria minor W. Stone

Slender Nutrush

G4

**S**1 E

Cyperaceae (Sedge Family)

Cons/Econote: Occurring in few and generally very small populations. Endangered by habitat loss and woody succession.

**Habitat**: Meadows and clearings in seasonally saturated sandy and peaty soils.

State State Federal Global Scientific Name Common Name Rank Rank Status Status

**Distr.** CP (Caroline, Wicomico, Worcester).

Flw/Fr: late Jul-Aug.

Scleria muehlenbergii Steudel

Muehlenberg's Nutrush G5

Cyperaceae (Sedge Family)

Syn: S. muhlenbergii Steudel, an orthographic variant

S. reticularis Michaux var. pubescens Britton

Cons/Econote: Occurring in few and generally very small populations that are now heavily fragmented. Rod Simmons (pers. comm.) notes that several now isolated stations along the Fall Line were likely a continuous edge of peaty fens that were divided by the construction of Interstate 95. Few stations are on protected lands.

**Habitat**: Seepage slopes, peaty fens, and wet meadows often over soils derived from ultramafic substrates.

**Distr**. CP, PD (Baltimore, Cecil, Charles, Prince George's).

Flw/Fr: late Aug-Sept (mid Oct).

Scleria nitida Willdenow

**Shining Nutrush** 

**GNR** 

**S**1

**S1S2** 

Ε

Cyperaceae (Sedge Family)

**Taxnote**: Generally subsumed under *S. triglomerata*, however, this species is morphologically and ecologically distinctive.

Cons/Econote: Fire suppression likely plays a role in this species' rarity. All stations require active management to maintain population size and generally all populations are very small and endangered by succession to closed canopy forest.

**Habitat**: Inland sand dune and ridge woodlands in xeric, sandy soils.

Distr. CP (Caroline, Dorchester, Wicomico, Worcester).

Flw/Fr: late Jul-Oct (Feb).

Scleria oligantha Michaux

Little-head Nutrush

G5

**S**1

Cyperaceae (Sedge Family)

Cons/Econote: An interesting addition to the state's flora; known to occur at a single station in what appears to be the northern range limit (collected in the District of Columbia in 1874).

Habitat: Rich mesic forest. **Distr**. PD (Montgomery).

Flw/Fr: Jun.

Scleria reticularis Michaux

Reticulated Nutrush

G4

**S2S3** 

Cyperaceae (Sedge Family)

Cons/Econote: Nearly confined to seasonal wetlands that require management to control woody growth.

**Habitat**: Delmarva Bays, Fall Line seeps/fens.

State State Federal Global Common Name Scientific Name Rank Rank Status Status Distr. CP. PD\* (Caroline, Carroll\*, Dorchester, Montgomery\*, Prince George's\*, Queen Anne's, Somerset, Wicomico, Worcester). Flw/Fr: Aug-Sept. Scleria triglomerata Michaux Whip Nutrush G5 **S**3 Cyperaceae (Sedge Family) **Habitat**: Wet meadows, clearings, road verges in sandy/peaty soils. **Distr**. CP (Anne Arundel, Baltimore, Caroline, Dorchester, Prince George's, St. Mary's, Wicomico, Worcester). Flw: late Jul; Fr: Sept-Oct. Scleria verticillata Muhlenberg ex Willdenow **S**1 Low Nutrush G5 E Cyperaceae (Sedge Family) Cons/Econote: Endangered by sea level rise and salt-water intrusion into fragile plant communities. **Habitat**: Freshwater seeps and interdunal swales on the barrier island (Assateague). **Distr**. CP (Worcester). Flw/Fr: Sept-Oct. Sclerolepis uniflora (Walter) Britton, Sterns, & Poggenburg One-flower Sclerolepis G4 S2Τ Asteraceae (Aster Family) **Cons/Econote**: Threatened by habitat loss and alteration of site hydrology. **Habitat**: Delmarva Bays and seepage wetlands in sandy/peaty soils. **Distr**. CP (Caroline?, Dorchester, Queen Anne's, Wicomico, Worcester). Flw: late Jun-Jul; Fr: Jul-Aug. Scrophularia lanceolata Pursh Hare Figwort G5 **S**3 Scrophulariaceae (Figwort Family) **Cons/Econote**: Frequent but generally in low numbers; rare on the Coastal Plain. **Habitat**: Rich woods, floodplains. **Distr.** AP, CP, PD, RV (Allegany, Anne Arundel, Baltimore, Calvert, Cecil, Frederick, Garrett, Harford, Montgomery, Washington; distribution likely incomplete). Scutellaria galericulata Linnaeus Hooded Skullcap **S**2 G5 Lamiaceae (Mint Family) **Cons/Econote**: This northern species occurs near its southern range extent in a variety of wetland types but generally in low numbers.

**Habitat**: Seepage wetlands, freshwater marshes, baymouth barrier swamps (Sipple 1982), riverine scour bars.

Distr. AP, CP, PD (Baltimore, Calvert, Cecil, Garrett, Harford, Howard?, Kent, Montgomery).

Flw: Jul; Fr: Aug-Sept.

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Scientific Name Common Name Rank Rank Status Status
Scutellaria incana Biehler Hoary Skullcap G5T5 S3

Lamiaceae (Mint Family)

**Taxnote**: Maryland plants are the widespread var. *incana*.

**Cons/Econote**: A habitat specialist; populations occur in low numbers.

**Habitat**: Rich woods, often over limestone.

Distr. AP, PD, RV (Allegany, Cecil, Frederick, Garrett, Harford, Montgomery\*, Washington).

Flw: Jul-Aug; Fr: late Aug-Sept.

Scutellaria leonardii Epling

Leonard's Skullcap G4 S2

Shale Barren Scullcap

Lamiaceae (Mint Family) Shale B **Svn**: *S. parvula* Michaux var. *missouriensis* (Torrey) Goodman & Lawson

S. parvula var. leonardii (Epling) Fernald

**Taxnote**: Often treated as a variety of *S. parvula*, which has led to much taxonomic confusion regarding the identity of Maryland populations. *S. parvula* does not occur in Maryland as all Maryland collections discovered to date are *S. leonardii*. The closely related *S. australis* (Fassett) Epling has been collected in the District of Columbia.

**Cons/Econote**: Threatened by woody succession of barrens habitat, fire suppression, and competition with exotic species.

Habitat: Shale barrens and rocky woods or glades over mafic and ultramafic (serpentine) substrates.

**Distr**. PD, RV (Allegany, Baltimore, Cecil, Frederick\*, Harford, Howard?, Montgomery, Washington\*).

Flw: mid May-Jun; Fr: Jul-Oct.

Scutellaria nervosa Pursh!

Lamiaceae (Mint Family)

Veined Skullcap

G5

S1S2 E(PT)

T

**Cons/Econote**: Threatened by loss and degradation of mature, mesic hardwood forests by encroaching exotic, invasive species. Recently located in montane alluvial forests along tributaries to Town Creek (Allegany) and should be sought elsewhere in the area. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Shell-marl ravine forests, shell middens (oyster) and floodplain terrace forests over rich alluvial soils.

Distr. CP, PD, RV (Allegany, Cecil, Charles, Frederick, Kent, Montgomery, Prince George's, Washington).

Flw: May; Fr: Jun.

Scutellaria ovata Hill

Heartleaf Skullcap

G5TNR

**S**3

Lamiaceae (Mint Family)

Syn: S. versicolor

S. ovata Hill ssp. virginiana Epling

Taxnote: Maryland plants are ssp. rugosa (Wood) Epling.

Habitat: Dry forests, woodlands, glades.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Distr.** PD, RV (Allegany, Frederick, Montgomery, Washington).

Flw: late Jun-early Jul; Fr. Jul-Oct.

Scutellaria saxatilis Riddell

Rock Skullcap

G3

**S**1

Ε

Lamiaceae (Mint Family)

Cons/Econote: Endangered by competition with exotic, invasive species and habitat loss. Narrowly distributed and habitat-restricted in Maryland to fragments of mature forests.

**Habitat**: Rich mesic mixed forests.

Distr. AP, PD, RV (Frederick, Garrett, Montgomery).

Flw: Aug; Fr: Sept.

Scutellaria serrata Andrzedowski

Showy Skullcap

G4G5

**S**3

Lamiaceae (Mint Family)

Habitat: Rich woods, infrequent.

**Distr**. AP, CP\*, PD, RV (Baltimore\*, Carroll, Cecil\*, Frederick, Garrett, Howard, Montgomery, Prince George's\*).

Sedum glaucophyllum Clausen

Cliff Stonecrop

G4

**S**2

Τ

Crassulaceae (Stonecrop Family)

Cons/Econote: Threatened by competition and displacement by invasive species.

**Habitat**: Forested, generally rocky slopes over limestone, calcareous shales or other mafic substrates.

Distr. AP, RV (Allegany, Garrett).

Senecio suaveolens (Linnaeus) Elliott

Sweet-scented Indian-plantain

G4

S1

E

Asteraceae (Aster Family)

Svn: Cacalia suaveolens Linnaeus

Hasteola suaveolens (Linnaeus) Pojarkova

Synosma suaveolens (Linnaeus) Rafinesque ex Britton

Cons/Econote: A declining species in the eastern U.S. due to habitat degradation from heavy siltation, alteration of flooding regimes and competition with invasive species (NatureServe 2015). According to Wiegand (2010) the species appears and disappears from sites along the Potomac River as light gaps appear and close in the forest canopy.

Habitat: A variety of open to lightly-shaded habitats along river banks, light-gaps on the floodplain, side channels and pond and pool margins.

**Distr**. AP\*, PD, RV (Allegany, Cecil\*, Frederick, Garrett\*, Harford, Montgomery, Washington).

Flw: Aug; Fr: Sept-Oct.

Scientific Name
Common Name
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Status

Syn: Cassia marilandica Linnaeus

**Habitat**: Streamside cobble bars and riverside prairies.

**Distr**. PD, RV (Allegany, Frederick, Montgomery, Washington).

Flw: Jul; Fr: Aug-Sept.

Sesuvium maritimum (Walter) Britton, Sterns, & Poggenburg Puerto Rico Sea-Purslane G5 S1 E

Aizoaceae (Fig-marigold Family)

**Cons/Econote**: Endangered by habitat loss and alteration. Sea level rise may pose additional threats.

Habitat: Sandy shorelines, foredunes and overwash zones (generally actively eroding) on the Atlantic coast and Chesapeake Bay.

Distr. CP (Calvert, Somerset, Worcester).

Sida hermaphrodita (Linnaeus) Rusby Virginia Mallow G3 S1 E

Malvaceae (Mallow Family)

**Cons/Econote**: Endangered by landscape-level habitat loss and alteration of riparian habitat. The remaining populations are small, isolated and subject to multiple threats including competition with invasive species.

**Habitat**: Frequently scoured gravel bars and river island shorelines.

Distr. PD, RV (Allegany, Cecil, Montgomery, Washington).

Flw: Jul; Fr: Aug-Sept.

Silene nivea (Nuttall) Muhlenberg ex Otth Snowy Campion G4? S1 E

Caryophyllaceae (Pink Family)

Syn: Silene alba Muhlenberg, misapplied

**Cons/Econote**: Endangered by habitat loss, displacement by invasive species and demographic factors associated with small population size. Regionally rare and declining, recent surveys have not relocated many of the Potomac River populations.

**Habitat**: Mature floodplain and terrace forests over rich alluvial soils.

Distr. CP\*, PD\*, RV (Allegany\*, Baltimore\*, Carroll?, Frederick, Harford\*, Howard\*, Montgomery\*, Prince George's\*, Washington).

Silphium asteriscus Linneaus Threeleaf Rosinweed

var. trifoliatum (Linneaus) J.A. Clevinger

Asteraceae (Aster Family)

Syn: Silphium trifoliatum Linnaeus

**Cons/Econote**: Locally frequent over base-rich soils, particularly limestone.

Habitat: Limestone glades, mafic woodlands and meadows.

**S**3

G4?T4?

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Distr**. PD, RV (Allegany, Baltimore?, Frederick, Harford, Howard\*, Montgomery, Washington).

Flw: mid Jul-Aug; Fr: Aug-Sept.

#### Sisyrinchium arenicola E. P. Bicknell

Sandyland Blue-eyed Grass GNR S1 E

Iridaceae (Iris Family)

Syn: S. fuscatum E. P. Bicknell, in part.

**Taxnote**: Treated here as an endemic species of coastal sand plains distributed from eastern Massachusetts south to eastern Maryland (Sorrie & Weakley 2001; see also Ward 1999).

**Cons/Econote**: Two known stations. Reported from the Snow Hill area in Worcester County by Moldenke (1945, specimen not seen) an area where inland sand dunes occur frequently over the landscape.

Habitat: Inland sand dune and ridge woodlands.

**Distr**. CP (Caroline, Dorchester, Worcester?).

Flw: late May-early Jun; Fr: Jul.

Smilacina stellata (Linnaeus) Desfontaines

see Maianthemum stellatum (L.) Link

#### Smilax bona-nox Linnaeus

Saw Greenbrier

G5

**S**3

Smilacaceae (Greenbrier Family)

**Habitat**: Maritime dunes and woodlands.

Distr. CP (Calvert, Worcester).

#### Smilax ecirrata (Engelmann ex Kunth) S. Watson

Upright Greenbrier

G5?

S1S3

Smilacaceae (Greenbrier Family)

Syn: S. ecirrhata, an orthographic variant

**Taxnote**: Sexual reproduction in Maryland plants has not been observed and this appears typical of the species. One historical specimen was collected in flower/early fruit and was easily identified. Perhaps overlooked as *Smilax herbacea* with which it co-occurs; they are similar in appearance, especially in early growth. Rare sexual reproduction is a recurring theme in the shale barren region, occurring in several phylogenetically unrelated taxa (e.g., *Calamagrostis porteri*, *Spiraea corymbosa*, *Veratrum hybridum*).

Cons/Econote: Disjunct from the core range in the Midwest, this species is infrequent in Green Ridge State Forest (Allegany County).

**Habitat**: Dry to mesic mixed hardwood forests and woodlands.

Distr. PD, RV (Allegany, Cecil, Frederick\*, Washington).

Flw: not observed; Fr: early Sept.

#### Smilax pseudochina Linnaeus

Long-stalk Greenbrier

G4G5

S2 T

Smilacaceae (Greenbrier Family)

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Cons/Econote**: Threatened by wetland succession and invasion of edge habitats by invasive species. Endemic to the southern Coastal Plain, this species occurs as widely dispersed populations and often as single individuals.

Habitat: Edge habitats in tidal and nontidal swamp forests and shrub swamps; coastal acidic seeps.

Distr. CP, PD (Anne Arundel\*, Calvert, Caroline, Cecil, Charles, Dorchester, Kent, Montgomery, Prince George's, St. Mary's,

Worcester).

Flw: mid Jun; Fr: mid Aug.

#### Solidago arguta Aiton var. arguta

Late Goldenrod

G5T4T5

S1?

Asteraceae (Aster Family)

Taxnote: S. arguta is comprised of var. arguta and var. caroliniana; confident distributions for both varieties are largely undetermined.

Cons/Econote: There are few collections (see Kolb 1991); however, the S. arguta complex is generally poorly inventoried in Maryland.

**Habitat**: Thin soils of steep rocky slopes.

**Distr**. AP\*, PD, RV\*? (Allegany\*, Cecil, Frederick?, Garrett\*, Harford; distribution likely incomplete).

#### Solidago arguta Aiton var. caroliniana A. Gray

Atlantic Goldenrod

G5T4

S1?

Vasey's Goldenrod

Syn: S. arguta ssp. caroliniana (A. Gray) G.H. Morton var. caroliniana

S. arguta Aiton ssp. caroliniana (A. Gray) G.H. Morton

**Taxnote**: Kolb (1991) suggests that the treatment in Brown & Brown (1984) of *Solidago boottii* (treated in Weakley 2015 as *S. arguta* var. *bootii*) is this variety; however, he only states that var. *caroliniana* should be sought in Garrett County.

**Cons/Econote**: Discovered by the Service at two stations. Apparently overlooked as either var. *arguta*, or in the shale barren region, as *S. harrisii*.

**Habitat**: Shale barren outcrops.

Distr. RV (Allegany).

Flw: late Aug-Sept; Fr: Oct-Nov.

#### Solidago harrisii Steele

Shale barren Goldenrod

G5T4

**S**3

Asteraceae (Aster Family)

Syn: S. arguta Aiton var. harrisii (Steele) Cronquist

**Cons/Econote**: Endemic to the mid-Appalachian shale barren region of MD, KY, VA, and WV but with a much broader occurrence than previously thought. Not abundant but regularly occurring in habitat.

Habitat: Shale barrens and limestone glades.

Distr. RV (Allegany, Washington).

Flw: mid June-Aug (Sept); Fr: Sept-Oct.

## Scientific Name Common Name Rank Rank State State Federal Rank Status Status Status Status Status Status Status Status Status

Asteraceae (Aster Family)

Syn: S. bicolor Linnaeus var. concolor Torrey & A. Gray

S. bicolor Linnaeus var. hispida (Muhlenberg ex Willdenow) BSP

**Taxnote**: Maryland plants are the widespread var. *hispida*.

**Cons/Econote**: Restricted to western Maryland and infrequent east of Allegany County. Known from numerous small, patchy, and generally linear populations.

**Habitat**: Forest edges and meadows along roadcuts and powerline rights-of-way, chiefly occurs on shale substrates but not restricted to shale.

**Distr**. RV (Allegany, Frederick, Washington).

Flw: mid-late Sept; Fr: Sept-Oct.

#### Solidago latissimifolia Miller

Elliott's Goldenrod

G5

**S**3

Asteraceae (Aster Family)

Syn: S. elliottii Torrey & A. Gray

Habitat: Sunny low meadows, marshes, and forest edges in saturated, sandy/peaty soil.

Cons/Econote: Local and perhaps declining.

**Distr**. CP (Caroline\*, Dorchester, Prince George's\*, Wicomico, Worcester; distribution likely incomplete).

#### Solidago patula Muhlenberg ex Willdenow

Sharp-leaved Goldenrod

G5T5

**S**3

Asteraceae (Aster Family)

Taxnote: Maryland plants are subspecies patula.

Habitat: Wet meadows and upland marshes over mafic and ultramafic substrates.

**Cons/Econote**: The associations with permanently saturated and base-rich soils combine to limit this species to small-patch habitats.

Distr. CP, PD, RV (Allegany, Baltimore, Carroll, Frederick, Harford, Prince George's, Washington; distribution likely incomplete).

Flw: mid Aug-early Sept; Fr: Sept-Nov.

#### Solidago racemosa Greene

Racemose Goldenrod

G3

S1 '

T

Asteraceae (Aster Family)

Syn: Solidago simplex Kunth var. racemosa (Greene) G.S. Ringius

S. spathulata DC var. racemosa (Greene) Cronq. ex Gleason

**Taxref**: Semple, J.A. and J. A. Peirson (2013).

**Taxnote**: Semple (2013) revised the nomenclature for the *S. simplex* complex after Pierson et al. (2012) showed that polyploid *S. simplex* ssp. *randii* and its varieties were likely not a single lineage.

Cons/Econote: Narrowly distributed and uncommon in North America; there is a single Maryland station.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

Habitat: Cliff faces and crevices with shell deposits (Davis 2011).

**Distr**. PD (Montgomery).

Solidago rigida Linnaeus!

Prairie Goldenrod

G5

S1 X(PE)

Asteraceae (Aster Family)

Syn: Oligoneuron rigida (Linnaeus) Small

**Cons/Econote**: Recently rediscovered after a period of 63 years by Jim Stasz at a single station. The Service has forwarded a proposal to list this species as endangered.

**Habitat**: Mafic outcrops and meadows.

**Distr**. AP\*, PD\*, RV (Cecil\*, Frederick\*, Garrett\*, Montgomery\*, Washington).

Flw: mid-late Sept; Fr: Oct.

#### Solidago roanensis Porter!

Roan Mountain Goldenrod G4G5

S3 E(PD)

Asteraceae (Aster Family)

Syn: S. roanensis var. monticola (Torrey & Gray) Fernald

S. monticola Torrey & Gray

**Cons/Econote**: Restricted to the Appalachian Plateau from Dan's Mountain westward but occurs frequently in open habitats. Long confused with *S. puberula*. Museum work has uncovered a number of historical collections that had been misidentified, and recent field work has discovered/rediscovered multiple populations. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: High elevation meadows and forest edges in rocky, gravelly or clayey soils.

**Distr**. AP (Allegany, Garrett). **Flw**: Aug-Sept; **Fr**: Sept-Oct.

#### Solidago rupestris Rafinesque!

Rock Goldenrod

G4

S1 X(PD)

Asteraceae (Aster Family)

Syn: S. canadensis L. var. rupestris (Rafinesque) Porter

**Taxnote**: Historically confused with *S. racemosa* in the Potomac Gorge, and very closely resembling the common *S. canadensis*.

Cons/Econote: Historical at several sites along the Potomac River Gorge, and recently rediscovered at a single station near Carderock by Wes Knapp and colleagues. The Allegany County record based upon an 1894 collection by Cumberland area teacher and botanist Howard Shriver (1824-1901) was actually from Mineral County, WV (see Semple & Frye 2017). Finally, Stephen Hill made a collection from atypical habitat in Garrett County (Little Meadows) in 1980, which suggests the species may be overlooked as *S. canadensis* and that the species should be further sought in that county. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Riverside bedrock scour bars, outcrops and rocky slopes.

Distr. AP, PD (Garrett, Montgomery).

**Flw**: early-late Sept; **Fr**: Oct-Nov.

# Scientific Name Common Name Rank Rank State State Federal Rank Solidago speciosa Nuttall Showy Goldenrod G5T5? S2 T

Asteraceae (Aster Family)

**Taxnote**: Maryland plants are the widespread ssp. *speciosa* Nutt. var. *speciosa*.

**Cons/Econote**: Nearly restricted to southern Maryland (Western Shore) our populations are perhaps remnants of historical prairie-like habitats that are persisting in artificially maintained rights-of-way. Disjunct on the Eastern Shore shell middens (McAvoy & Harrison 2012).

Habitat: Sandy barrens and shell middens.

**Distr**. CP (Anne Arundel\*, Baltimore\*, Calvert, Kent, Prince George's\*).

Flw: Sept; Fr: Sept-Oct.

## Solidago tarda Mackenzie ex Small

Coastal Goldenrod

G4?

**S**1

Asteraceae (Aster Family)

Syn: S. arguta Aiton, misapplied

Taxref: Semple, J.C. and R.E. Cook. 2006.

**Taxnote**: Plants referable to *S. tarda* have long been subsumed under *S. arguta. Solidago tarda* differs in having larger involucres and elongate rhizomes.

**Cons/Econote**: The few known Maryland populations are associated with xeric sand ridge habitats. Fire exclusion may play a role in this species' rarity.

Habitat: Xeric sands of inland sand dune and ridge woodlands.

Distr. CP (Dorchester, Wicomico, Worcester).

Flw: Oct; Fr: Oct-Nov.

#### Solidago uliginosa Nuttall

Bog Goldenrod

G4G5

G5

**S**3

Asteraceae (Aster Family)

**Cons/Econote**: Chiefly occurring in Garrett County peatlands; not abundant but frequent in habitat. Some, or all, Piedmont stations may be based upon confusion with *S. patula*.

**Habitat**: More commonly occurring in peatlands, fens and wet meadows in the mountains, rare in Fall Line seeps ("magnolia bogs", sensu MacAtee 1918).

Distr. AP, CP, PD (Allegany, Baltimore\*, Garrett, Montgomery, Prince George's).

Flw: Sept; Fr: Sept-Oct.

#### Sorbus americana Marshall

American Mountain Ash

**S**3

Rosaceae (Rose Family)

Cons/Econote: Infrequent and restricted to Allegany and Garrett Counties.

**Habitat**: High elevation forests and outcrops.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

Distr. AP, RV (Allegany, Garrett).

Flw: Jun; Fr: Aug-Dec.

Sorghastrum elliottii (C. Mohr) Nash

Long-bristle Indian Grass **S**1 G5 Ε

Poaceae (Grass Family)

Cons/Econote: Remaining populations are small, isolated and require habitat management to persist. Maryland is the northern terminus of the species' southeastern range.

**Habitat**: Clearings and edges of inland sand dune and ridge forests.

**Distr**. CP (Dorchester, Worcester).

Flw/Fr: mid Aug-mid Sept.

Sparganium androcladum (Engelm.) Morong

Branching Bur-reed G4G5

SU

Typhaceae (Cattail Family)

Cons/Econote: The North American range is oddly discontinuous with several localized geographic population centers (Flora North America v. 22). In Maryland, most reports are from Charles County but several records have not been confirmed.

**Habitat**: River swamps.

**Distr**. CP, PD? (Anne Arundel?, Caroline, Charles, Montgomery?).

Sparganium emersum Rehmann

Greenfruit Bur-reed G5 **S**3

Typhaceae (Cattail Family)

Syn: S. chlorocarpum Rydberg

S. angustifolium Michaux ssp. emersum (Rehmann) Brayshaw

**Taxnote**: Gross leaf morphology differs greatly between the thin, flaccid submersed leaves and the thicker, greener and more erect emersed leaves (in appearance an upright herb).

**Cons/Econote**: Narrowly distributed in Maryland and associated with high quality montane wetlands.

**Habitat**: Fens and seepage wetlands.

Distr. AP (Garrett).

Sparganium eurycarpum Engelm. ex A. Gray

Giant Bur-reed

G5

**S**3

Typhaceae (Cattail Family)

Syn: S. erectum L. ssp. stoloniferum (Graebner) C.D.K. Cook & M.S. Nichols

Cons/Econote: Reported as common by Brown & Brown (1984); the Service is unsure of this attribution.

**Habitat**: Freshwater marshes, seepage wetlands and sphagnous fens.

**Distr.** AP, CP, RV (Cecil, Frederick, Garrett, Prince George's, Washington; distribution likely incomplete).

Scientific Name

Common Name

Rank

Rank

State

State

Federal

Rank

Status

Status

Status

Status

Rubiaceae (Madder Family)

Cons/Econote: Restricted to the Potomac River Gorge in Maryland, the northern terminus of the species' range.

Habitat: Rocky, riverside scour bars.

**Distr**. PD (Montgomery).

Sphenopholis pensylvanica (L.) A.S. Hitchcock

Swamp Oats

G4

S2 T

Poaceae (Grass Family)

Swamp Wedgescale

**Cons/Econote**: Generally occurs in small populations threatened by woody succession of open meadow habitat and loss or alteration of fresh tidal marsh.

**Habitat**: Fens, seepage wetlands, pond shores, fresh tidal marshes.

Distr. AP, CP, PD (Baltimore, Caroline, Carroll, Cecil, Dorchester, Garrett, Montgomery, Prince George's, Talbot, Worcester).

Flw/Fr: mid-late May (Jun).

Spiraea betulifolia Pallas

Corymbed Spiraea

G5T4?

**S**3

var. corymbosa (Rafinesque) Maximowicz

Rosaceae (Rose Family)

Syn: S. betulifolia Pallas ssp. corymbosa (Rafinesque) Taylor & McBryde

S. corymbosa Rafinesque

**Taxnote**: Plants treated variously as varieties of *S. betulifolia* (nomenclature discussed by Hess 1976) or as a complex of related species under *S. corymbosa*. The multiple disjunct natures of the populations in North America and the lack of flowering individuals in many populations create taxonomic uncertainty.

**Cons/Econote**: Narrowly distributed but locally frequent. Flowering, rarely observed, has occurred after heavy disturbances to the canopy. Presumably reproduction in natural habitat is stimulated by fire. Rare sexual reproduction is a recurring theme in the shale barren region occurring in several phylogenetically unrelated taxa (e.g. *Smilax ecirrata*, *Calamagrostis porteri*, *Veratrum hybridum*).

**Habitat**: Dry forests over shale.

Distr. RV (Allegany, Washington).

Flw: mid Jun-Jul (from garden transplants); Fr: Aug-Sept.

Spiranthes lucida (H.H. Eaton) Ames

Shining Ladies'-tresses

G5

S1 E

Orchidaceae (Orchid Family)

Syn: S. plantaginea Rafinesque

**Cons/Econote**: Only one known station with a few plants. The historical records are presumed extirpated.

Habitat: Meadows.

**Distr**. AP?, CP\*, PD (Baltimore\*, Cecil, Dorchester\*, Garrett?, Montgomery\*, Wicomico\*).

State State Federal Global Scientific Name Common Name Rank Status Status Rank Spiranthes ochroleuca (Rydberg) Rydberg Yellow Nodding Ladies'-tresses G4 **S**1 E

Orchidaceae (Orchid Family)

Syn: S. cernua (L.) L.C. Richard var. ochroleuca (Rydberg) Ames

Cons/Econote: The prairie-like sites where this species grows are threatened by woody succession and invading woody honeysuckles (Lonicera maackii).

Habitat: Shale barrens and grassy meadows.

**Distr**. AP\*, PD\*, RV (Allegany, Baltimore\*, Frederick, Garrett\*, Montgomery\*, Washington).

Flw: Sept; Fr: Oct-Nov.

Spiranthes odorata (Nutt.) Lindley

Fragrant Ladies'-tresses G5

SH

Orchidaceae (Orchid Family)

Sweetscent Ladies'-tresses

X

Syn: S. cernua (L.) L.C. Richard var. odorata (Nutt.) Correll

**Taxnote**: Relative plant size is often used as a taxonomic character, which may not be reliable. Not all Maryland records have been confirmed.

Cons/Econote: Endemic to the southeastern Coastal Plain (Weakley 2015); Maryland populations are near the northern range limit for this species.

**Habitat**: Fresh to oligohaline tidal marshes.

**Distr**. CP\* (Dorchester\*, Wicomico\*, Worcester\*).

Spiranthes praecox (Walter) S. Watson

Grass-leaved Ladies'-tresses G5

SH

Orchidaceae (Orchid Family)

Cons/Econote: An endemic to the southern Coastal Plain; the species has been collected from Assateague Island.

**Habitat**: Damp sandy soils of the barrier island (Assateague).

**Distr**. CP\* (Worcester\*).

Spiranthes tuberosa Rafinesque

Little Ladies'-tresses

G5

S1?

Orchidaceae (Orchid Family)

**Syn**: S. grayi Ames

**Cons/Econote**: Rarely observed and generally found in low numbers.

**Habitat**: Dry, sandy soils.

**Distr**. CP, PD\* (Cecil\*, Kent\*, Montgomery\*, Prince George's, Wicomico\*, Worcester).

Flw: late Aug-Sept; Fr: Sept-Oct.

Sporobolus clandestinus (Biehler) A. S. Hitchcock

Rough Dropseed

G5

S2

Poaceae (Grass Family)

**Habitat**: Inland sand dunes, sandy or rocky barrens and bedrock scour bars.

State State Federal Global Scientific Name Common Name Rank Rank Status Status

Distr. CP, PD, RV (Allegany, Calvert\*, Caroline, Cecil\*, Dorchester, Montgomery, Queen Anne's\*, Wicomico, Worcester).

Flw/Fr: Sept-Oct.

Sporobolus heterolepis (A. Gray) A. Gray

Northern Dropseed

G5

**S**1

Ε

Poaceae (Grass Family)

Cons/Econote: A species of the Great Plains; Maryland populations are geographic outliers and are extremely habitat limited. Threatened by fire exclusion, woody succession of barrens habitat and fragmentation due to extensive habitat loss.

**Habitat**: Serpentine barrens. Distr. PD (Cecil, Harford).

Flw/Fr: Sept.

Stachys aspera Michaux

Gritty Hedge-nettle

G4?

S1

Ε

Lamiaceae (Mint Family)

**Syn**: S. hyssopifolia Michaux var. ambigua A. Gray.

**Taxnote**: Maryland plants have long confounded the experts but have been recently confirmed by taxonomic experts.

**Cons/Econote**: Endangered by small population size and habitat loss and alteration.

**Habitat**: Fresh tidal swamp forests, rich bottomland forests; prefers open, sunny habitats.

**Distr**. CP, PD\*? (Caroline, Cecil\*?, Dorchester, Montgomery\*?, Wicomico, Somerset\*).

Flw: Jul; Fr: Aug-Sept.

Stachys eplingii J.B. Nelson

Epling's Hedge-nettle

G5

**S**1

Lamiaceae (Mint Family)

Syn: S. nuttallii Shuttleworth ex Bentham

**Taxnote**: The recognition of this species has been clouded by nomenclatural confusion with S. nuttallii and S. cordata (see Nelson & Fairey 1979). The identification of this species by the Service from herbarium specimens labeled as E. cordata resolves long-lasting phytogeographic uncertainties, i.e., records that were hundreds of kilometers distant from the known range of the southern Appalachian species, S. cordata and S. nuttallii. Taxonomic confusion with S. eplingii and may also account for reports of S. clingmannii (narrow endemic of the s. Appalachian Mountains) from Maryland.

Cons/Econote: Apparently regionally rare; most states within the range consider this species a conservation target. Distribution is not certain in Maryland and not all records have been verified.

**Habitat**: Open-canopy marsh. Other records for this species appear associated with rich or calcareous fen-like marshes.

**Distr**: AP\*, PD, RV\* (Allegany\*, Garrett\*, Harford?, Montgomery).

Flw: Jun-early Jul; Fr: Jul-Sept.

Stachys hyssopifolia Michaux

Lamiaceae (Mint Family)

Hyssopleaf Hedge-nettle

G4G5

S1

Scientific Name Global State State Federal Rank Rank Status Status

**Taxnote**: Maryland plants are the widespread var. *hyssopifolia*. Morphologically complex with some forms grading into the common *S. hispida*.

**Cons/Econote**: Scattered occurrences across the State; several records need confirmation.

Habitat: Stream borders and meadows.

**Distr**. CP, PD\*, RV\* (Anne Arundel, Baltimore\*, Frederick\*, Queen Anne's\*, Prince George's\*).

Flw: Aug; Fr: Sept-Oct.

Stellaria alsine Grimm

**Trailing Stitchwort** 

G5

S1 E

Caryophyllaceae (Pink Family)

**Cons/Econote**: Circumboreal, perhaps a relictual species persisting in scattered small populations.

**Habitat**: Spring seeps and gravel bars along small streams.

Distr. CP, PD, RV (Allegany, Cecil, Harford, Howard, Montgomery, Prince George's, Washington?).

Stenanthium gramineum (Ker-Gawler) Morong

Eastern Featherbells

G4G5T3T5

S1 T

Melanthiaceae (Bunchflower Family)

**Taxnote**: Maryland plants are var. *gramineum*.

Cons/Econote: Threatened by habitat loss and fragmentation and with few protected populations.

Habitat: Minerotrophic seepage wetlands, often over serpentine or ultramafic rocks.

Distr. CP, PD, RV (Anne Arundel, Cecil, Frederick, Harford, Montgomery, Prince George's\*).

Flw: early Jul-mid Aug; Fr: Sept-Oct.

Stenanthium leimanthoides (A. Gray) Zomlefer & Judd

Pine Barren Deathcamas

G40

S1 E

Melanthiaceae (Bunchflower Family)

Syn: Zigadenus leimanthoides A. Gray

Z. densus (Desrousseaux) Fernald

**Cons/Econote**: Endangered by habitat conversion (surface mining). Narrowly confined in Maryland to a highly threatened zone of springfed seepage slopes (Knapp et al. 2011).

Death-camas

Habitat: Acidic gravel groundwater seeps.

**Distr**. PD (Cecil; the attribution to the Maryland mountains by Brown & Brown 1984 appears erroneous).

Streptopus lanceolatus (Aiton) Reveal

Rosy Twisted-stalk

G5

S1S2 T

Liliaceae (Lily Family)

Syn: S. roseus Aiton

S. lanceolatus (Aiton) Reveal var. roseus (Michaux) Reveal

**Cons/Econote**: Threatened by habitat loss; the species is both geographically and habitat restricted in Maryland.

Habitat: Hemlock (Tsuga canadensis) and northern hardwood forest slopes and ravines.

Global State State Federal Scientific Name Common Name Rank Rank Status Status **Distr**. AP (Garrett). Flw: May; Fr: Jun-Jul. Suaeda linearis (Elliott) Moquin Narrowleaf Seepweed **S**3 G5 Chenopodiaceae (Goosefoot Family) **Habitat**: Salt marsh flats and overwash zones. **Distr**. CP (Calvert, Somerset, Worcester). Symphoricarpos albus (L.) Blake Common Snowberry **S**1 G5T5 T

Caprifoliaceae (Honeysuckle Family)

Snowberry

**Taxnote**: Native Maryland plants are var. albus; the western var. leavigatus (Fernald) Blake is commonly planted and both taxa may appear in the nursery trade.

**Cons/Econote**: Threatened by competition with exotic woody honeysuckles (*Lonicera* spp.) and woody succession of barrens habitats.

Habitat: Shale barrens and limestone glades.

Distr. RV (Allegany, Washington). Flw: mid May- mid Jun; Fr: Jul-Aug.

#### Symphyotrichum concolor (L.) Nesom

Eastern Silvery Aster G5

**S**1

G2

Ε

Asteraceae (Aster Family)

**Syn**: *Aster concolor* L.

Cons/Econote: Endangered by habitat loss, few protected populations and population declines at extant stations; most Maryland collections are pre-1950.

Habitat: Sandy barrens on the Coastal Plain.

**Distr**. CP (Anne Arundel\*, Calvert, Charles\*, Prince George's\*, St. Mary's\*, Worcester\*).

Flw: mid-late Sept; Fr: Oct.

## Symphyotrichum depauperatum (Fernald) Nesom

Serpentine Aster

**S**1 E

Asteraceae (Aster Family)

Syn: Aster depauperatus Fernald

Cons/Econote: A habitat specialist endangered by habitat loss and fragmentation resulting from development, fire suppression and woody succession of barrens. Browsing white-tailed deer have suppressed reproduction for decades at one Maryland site.

**Habitat**: Serpentine barrens. Distr. PD (Baltimore, Cecil).

Flw: late Aug-Sept; Fr: Sept-Oct.

#### State State Federal Global Scientific Name Common Name Rank Status Status Rank Symphyotrichum drummondii (Lindlev) Nesom Drummond's Aster G4G5T4T5 S1

Asteraceae (Aster Family)

Syn: Aster drummondii Lindley

Aster sagittifolius var. drummondii (Lindley) Shinners

**Taxnote**: Maryland plants are var. *drummondii* 

Cons/Econote: A rare peripheral from the Midwest; Maryland records constitute the eastern-most stations in the geographic range of the species.

**Habitat**: Dry upland woods and meadows.

Distr. AP, PD\*, RV (Garrett, Montgomery\*, Washington).

Flw: Oct: Fr: Oct-Nov.

## Symphyotrichum laeve (Linnaeus) Löve & Löve

Smooth Blue Aster

G5T4

X(PD) S1?

var. concinnum (Willdenow) Nesom!

Asteraceae (Aster Family)

Syn: Aster steeleorum Shinners

Aster concinnus Willdenow

A. laevis Linnaeus var. concinnus (Willdenow) House

S. laeve ssp. concinnum (Willdenow) Semple & Brouillet

**Taxnote**: *S. laeve* is common but this taxon at any rank is regionally rare.

Cons/Econote: Habitat restricted with few, scattered occurrences. Several Maryland specimens appear intermediate and require confirmation. The Service has forwarded a proposal to modify this species' State Status.

**Habitat**: Dry rocky woods over mafic or calcareous rocks; disjunct on coastal shell middens.

**Distr**. AP, PD\*, RV\* (Allegany, Cecil\*, Garrett, Kent, Washington; distribution likely incomplete).

Flw: Sept-early Oct; Fr: Oct.

#### Symphyotrichum praealtum (Poiret) Nesom

Willow Aster

G5

S1

Asteraceae (Aster Family)

**Syn**: Aster praealtus Poiret

**Taxnote**: Potentially occurring in Maryland as either var. praealtus or var. angustior (Wiegand) Nesom, or both. Several records need to be determined and false reports exist.

Habitat: Alluvial soils and mesic forests over mafic substrates.

**Distr**. AP, RV? (Allegany?, Garrett).

Flw: Sept; Fr: Sept-Oct.

#### Symphyotrichum shortii (Lindley) Nesom

Short's Aster

G5

S3S4

Asteraceae (Aster Family)

Global State State Federal Scientific Name Common Name Rank Status Status Rank

Syn: Aster shortii Lindley

Cons/Econote: Narrowly distributed along the Potomac River (and tributaries) in w. MD but often locally abundant.

**Habitat**: Rich mesic forests; generally restricted to limestone and less frequently rich alluvium.

**Distr.** PD, RV (Allegany, Frederick, Montgomery, Washington).

Flw: late Sept-Oct; Fr: Oct-Nov.

#### Symplocos tinctoria (Linnaeus) L'Heritier

Horsesugar

G5

**S**3

Symplocaceae (Sweetleaf Family)

Cons/Econote: Locally abundant in the Pocomoke River drainage.

**Habitat**: Pine flatwoods and edges of inland dunes in seasonally saturated sandy/peaty soils.

Distr. CP (Wicomico, Worcester).

Flw: early May; Fr: Jun-Jul.

#### Taenidia montana (Mackenzie) Cronquist

Mountain Parsley

G3

S2

T

Apiaceae (Carrot Family)

Svn: Pseudotaenidia montana Mackenzie

Cons/Econote: A central Appalachian endemic threatened by habitat loss, woody succession of barrens habitat and heavy herbivory by white-tailed deer.

**Habitat**: Barrens and outcrops over limestone and calcareous shales.

**Distr**. RV (Allegany, Washington).

Flw: Jun; Fr: Aug-Sept.

#### Taxus canadensis Marshall

Canada Yew

G5

**S**2

T

Taxaceae (Yew Family)

Cons/Econote: Threatened by habitat alteration and severe herbivory by white-tailed deer.

**Habitat**: Northern hardwood and hemlock ravines and swamps.

Distr. AP (Garrett).

#### Tephrosia spicata (Walter) Torrey & A. Gray

Spiked Hoary-pea

G4G5

S1S2 E

Fabaceae (Legume Family)

Cons/Econote: Endangered by habitat loss. Fire suppression certainly plays a role in this species' rarity; the species appeared at a new station after a second prescribed burn (e.g., in the 'black line') in sand ridge habitat in Caroline County. The northernmost extant populations in the U.S. occur on Maryland's Eastern Shore.

**Habitat**: Inland sand dunes and ridges, roadsides and railroad embankments.

**Distr**. CP (Caroline, Dorchester, Wicomico, Worcester).

Flw: mid Jun-early Jul; Fr: Aug-Sept.

State State Federal Global Scientific Name Common Name Rank Rank Status Status Thaspium trifoliatum (L.) A. Gray G5 Purple Meadow-parsnip **S**1 Ε Apiaceae (Carrot Family) Taxnote: Inclusive of var. trifoliatum and var. aureum (L.) Britton; the taxonomic status of these varieties is not clear. Cons/Econote: Apparently restricted to mafic seeps and rich woods although the distribution of this species in Maryland is not well documented. **Habitat**: Rich, mesic forests and meadows. **Distr.** AP\*, CP?, PD, RV (Anne Arundel?, Baltimore\*, Cecil\*, Frederick, Garrett\*, Howard). Thelypteris simulata (Davenport) Nieuwland Bog Fern **S**2 G4 T Thelypteridaceae (Marsh Fern Family) **Cons/Econote**: Threatened by alteration of groundwater hydrology. Most of our coastal stations exist in highly fragmented habitats. **Habitat**: Acidic seepage fens and swamps. **Distr.** AP, CP, PD\* (Anne Arundel, Caroline, Charles, Garrett, Howard, Montgomery\*, Prince George's, Worcester). American Arborvitae **S**1 T Thuja occidentalis (Linnaeus) Linnaeus G5 Northern White Cedar Cupressaceae (Cypress Family) Cons/Econote: A nearly ubiquitous species in New England occurring in a variety of acidic habitats, this species is an obligate calciphile in its southern range. In Maryland it is both range and habitat restricted. Habitat: Limestone cliffs. Distr. RV (Allegany, Washington). Thyrsanthella difformis (Walter) Pichon Climbing Dogbane G5 S1Ε Apocynaceae (Dogbane Family) **Syn**: *Trachelospermum difforme* (Walter) A. Gray

Cons/Econote: Endangered by loss and alteration of nontidal wetland habitats.

Habitat: Upland depression swamps, swamp forests, floodplains, railroad rights-of-way.

**Distr**. CP, PD (Anne Arundel\*, Caroline, Dorchester, Montgomery, St. Mary's, Worcester).

Flw: Jun; Fr: Sept.

#### Tiedemannia canbyi (J.M. Coulter & Rose) Feist & S.R. Downie

Canby's Dropwort

G2

S1 E

LE

Apiaceae (Carrot Family)

Syn: Oxypolis canbyi (J.M. Coulter & Rose) Fernald

**Cons/Econote**: Rediscovered in Maryland in 1984 (Boone et al. 1984) and federally listed as Endangered since 1986, this species is endangered rangewide due to habitat loss and alteration of groundwater hydrology. Extant at a single location.

Habitat: Delmarva bay.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Distr**. CP (Queen Anne's). **Flw**: Jul-Aug; **Fr**: Sept.

Tillandsia usneoides (Linnaeus) Linnaeus

Spanish Moss

G5

SX

Bromeliaceae (Pineapple Family)

Cons/Econote: First described by John Ray in 1688, presumably from populations occurring in southern Maryland, now extirpated.

Brown et al. (1987) provide a valuable discussion of Maryland's colonial flora.

**Habitat**: In tree branches, especially on hardwoods, in mesic bluff forests (Weakley 2015).

**Distr**. (unknown county).

Torreyochloa pallida (Torrey) Church

Fernald's Mannagrass

G5T4O

**S**1

var. fernaldii (A.S. Hitchcock) Dore ex Koyama & Koyama

Poaceae (Grass Family)

Syn: Glyceria fernaldii (A. S. Hitchcock) St. John

Glyceria pallida (Torrey) Trinius var. fernaldii A.S. Hitchcock

Cons/Econote: Restricted in Maryland to boreal habitats but is cryptic and easily overlooked.

**Habitat**: Seepage swamps and fens at high elevations.

**Distr**. AP (Garrett). **Flw/Fr**: late Jul-Aug.

Torreyochloa pallida (Torrey) Church var. pallida

Pale Mannagrass

G5T5?

**S**3

Poaceae (Grass Family)

**Syn**: *Glyceria pallida* (Torrey) Trinius *Puccinellia pallida* (Torrey) Clausen

**Habitat**: Fresh tidal swamp forests, Delmarva Bays, ditches, disjunct in limestone sinkhole ponds.

Distr. CP, RV (Anne Arundel\*, Caroline, Dorchester, Kent, Prince George's, Queen Anne's, St. Mary's, Washington, Worcester).

Flw/Fr: late May-Jun.

Trachelospermum difforme (Walter) A. Gray

see Thyrsanthella difformis (Walter) Pichon

Trautvettaria caroliniensis (Walter) Vail

Tassel-rue

G5

**S**3

Ranunculaceae (Buttercup Family)

Cons/Econote: Nearly restricted to high quality streams in Garrett County; the Piedmont occurrence is a notable disjunct.

Habitat: Spring seeps, floodplain scour bars and seeps.

Distr. AP, PD (Garrett, Montgomery).

Flw: Jun; Fr: Aug-Sept.

		Global	State	State	Federal
Scientific Name	Common Name	Rank	Rank	Status	Status
Triantha racemosa (Walter) Small	Coastal False Asphodel	G5	SX	X	

Tofieldiaceae (False Asphodel Family)

Syn: Tofieldia racemosa (Walter) BSP

**Taxnote**: Often treated in a broadly circumscribed Liliaceae (Lily Family). The taxonomy of the genus is not resolved.

**Cons/Econote**: Extirpated by urban development along the Fall Line but collected over the period 1809-1951. Known from the "magnolia bogs" (McAtee 1918) and collected by Dr. John Ott around 1809 in the District of Columbia area (which may have also included Prince George's and/or Montgomery Counties). Ott sent plants from the "Columbia area" to Heinrich Muhlenberg in 1809; these included also *Arethusa bulbosa* (McAtee 1922).

**Habitat**: Fall line seeps.

**Distr**. CP\*, PD\* (Baltimore\*, Montgomery\*, Prince George's\*).

#### Trichophorum planifolium (Sprengel) Pala

Bashful Sedge

G5

S2

Cyperaceae (Sedge Family)

**Syn**: *Scirpus verecundus* Fernald *Scirpus planifolius* Muhlenberg

Cons/Econote: Scattered locations and generally small populations, the coastal records date to the late 1880s and are presumed extirpated.

**Habitat**: Dry to mesic, often rocky forests and woodlands.

**Distr**. AP, CP\*, PD, RV (Allegany, Baltimore, Cecil, Carroll\*, Harford, Montgomery, Prince George's\*).

#### Trichostema brachiatum Linnaeus

Glade Bluecurls

G5

**S**3

Lamiaceae (Mint Family)

Syn: Isanthus brachiatus (Linnaeus) Britton, Sterns, & Poggenburg

Habitat: Shale barrens, limestone, and greenstone glades.

Distr. RV (Allegany, Frederick, Washington).

Flw: Aug-Sept; Fr: Oct.

#### Trichostema setaceum Houttuyn

Narrowleaf Bluecurls

G5

**S**1

Lamiaceae (Mint Family)

**Syn**: *T. dichotomum* Linnaeus var. *lineare* (Walter) Pursh **Cons/Econote**: Narrowly distributed and habitat restricted.

**Habitat**: Shale barrens and woodlands.

Distr. RV (Allegany).

Flw: early Sept; Fr: Sept-Oct.

## Tridens chapmanii (Small) Chase

Chapman's Redtop

G3

**S**1

Poaceae (Grass Family)

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Syn**: *Tridens flavus* (Linnaeus) A.S. Hitchcock var. *chapmanii* (Small) Shinners **Cons/Econote**: Scattered as a rare and perhaps relictual element of coastal barrens.

**Habitat**: Calcareous shell woodlands (see McAvoy & Harrison 2012) and rich "pockets" embedded in sand ridge woodlands.

Distr. CP (Dorchester, Kent).

Flw/Fr: Sept.

#### Trifolium reflexum Linnaeus

**Buffalo Clover** 

G3G4

SH X

Fabaceae (Legume Family)

Cons/Econote: Extirpated throughout much of its U.S. range this species was last collected in Maryland in 1902 in the Potomac Gorge.

**Habitat**: Bedrock scour bar floodplain terraces.

**Distr**. PD\* (Montgomery\*).

#### Trifolium virginicum Small

Kate's Mountain Clover

G3

S2S3 T

Fabaceae (Legume Family)

**Cons/Econote**: Endemic to the Central Appalachian Shale Barrens (sc. PA south through MD to e. WV and w. VA). Threatened due to small population sizes, woody succession of shale barren habitat (see Tyndall 2015), and to an unknown extent fragmentation and isolation of the remaining habitat patches (see Frye & Neel 2016).

Habitat: Shale barrens.

Distr. RV (Allegany, Washington).

Flw: mid-Apr-early May; Fr: late Jun-Aug.

# Triglochin striata Ruiz & Pavón

Three-ribbed Arrow-grass G5

S1 E

Juncaginaceae (Arrowgrass Family)

**Syn**: *T. striatum*, an orthographic variant

Cons/Econote: Maryland populations form the northernmost extant stations in this species' extensive global range.

**Habitat**: Brackish to freshwater marshes in heads of tidal creeks.

Distr. CP (Dorchester, Somerset, Worcester).

Flw: late Jul-Aug; Fr: Sept.

#### Trillium cernuum Linnaeus

Northern Nodding Trillium G5

S3

Trilliaceae (Trillium Family)

**Habitat**: Rich woods and edges of forested swamps.

Distr. PD, RV (Baltimore, Carroll\*, Howard, Frederick, Harford, Montgomery, Washington).

Flw: mid May; Fr: Jun.

#### State State Federal Global Scientific Name Common Name Rank Rank Status Status **Nodding Trillium** G5 Trillium flexipes Rafinesque **S**1 Ε

Trilliaceae (Trillium Family)

Cons/Econote: Endangered by competition with invasive species and intensive browse by white-tailed deer.

**Habitat**: Shady ravines in rich mesic hardwood forest.

**Distr**. PD (Baltimore\*, Cecil/Harford?, Howard).

Flw: mid May; Fr: Jun.

#### Trillium nivale Riddell

Snow Trillium

G4

**S**1 Е

Trilliaceae (Trillium Family)

Cons/Econote: An apparent calciphile primarily distributed within the limits of previously glaciated regions. In Maryland, there is a single station with a small number of plants. Some surveyors have suggested the plants were essentially a single persistent clone; however, Nesom & La Duke (1985) concluded that clonal growth was of limited importance. Seeds (having an eliasome) are dispersed by ants. Shreve (1910) lists a Garrett County location (Oakland), as related by Joseph E. Harned.

Habitat: Dry limestone woodland.

Distr. AP?, RV (Garrett?, Washington).

Flw: late Mar-early Apr; Fr: May

# Trillium pusillum Michaux var. virginianum Fernald

Virginia Least Trillium

G3T2

S2

T

Trilliaceae (Trillium Family)

Cons/Econote: Threatened by habitat loss. This globally rare variant within Least Trillium occupies a narrow zone of available habitat in Maryland.

**Habitat**: Narrowly confined to mesic forests, forested seepage swamps and spring seeps often very near the ecotone with fresh tidal marsh.

**Distr**. CP (Worcester). Flw: Apr; Fr: May-Jun.

# Triosteum angustifolium Linnaeus

Yellowleaf Tinker's-weed

G5

**S**1 Ε

Caprifoliaceae (Honeysuckle Family)

**Taxnote**: Weakley (2015) recognizes two varieties in this species, var. angustifolium and var. eamsii Wiegand based upon leaf dimensions and pubescence of the lower leaf surface. These taxonomic splits have not been investigated with Maryland plants.

**Cons/Econote**: Endangered by habitat loss, excessive deer browse and competition with invasive species.

**Habitat**: Rich upland woods, river bluff forests, floodplain terraces over rich alluvial soils.

**Distr**. AP\*, CP\*, PD, RV (Allegany, Anne Arundel\*, Baltimore\*, Cecil, Frederick, Garrett\*, Howard, Montgomery).

## Triphora trianthophoros (Swartz) Rydberg

Nodding Pogonia Three Birds Orchid G3G4

S1

E

Orchidaceae (Orchid Family)

183

Global State State Federal Scientific Name Common Name Rank Rank Status Status

Syn. T. trianthophora, an orthographic variant.

**Taxnote**: Our plants are the eastern var. *trianthophoros*.

**Cons/Econote**: Endangered by habitat loss and competition with invasive species. Presumably extirpated from the Gold Mine Tract (Great Falls) by browsing white-tailed deer, and under threat by the same at the extant station in Queen Anne's County. A cryptic species notoriously difficult to locate.

Habitat: Rich, humid hardwood forests.

Distr. CP, PD\* (Cecil\*, Queen Anne's, Montgomery\*).

**Flw**: late Aug-early Sept; **Fr**: Sept-Nov.

## Typha domingensis Persoon

Southern Cattail

G4G5

**S**3

Typhaceae (Cattail Family)

Habitat: Fresh to oligonaline tidal marshes.

**Distr**. CP (Anne Arundel, Calvert, Howard, St. Mary's).

#### Utricularia cornuta Michaux

Horned Bladderwort

G5

**S**1

Lentibulariaceae (Bladderwort Family)

**Cons/Econote**: Few Maryland records for this wide-ranging species and a single extant site. Population size fluctuates over years and long periods may pass before flowering. Often confused with the more common *U. juncea* that has a similar habit and some coastal records for this species may reflect this confusion.

Habitat: Acidic seepage fens.

**Distr**. AP, CP\* (Anne Arundel\*, Garrett, Wicomico\*).

#### Utricularia inflata Walter!

Swollen Bladderwort

G5

S2

E(PD)

Lentibulariaceae (Bladderwort Family)

**Taxnote**: Often confused with *U. radiata* Small (*U. inflata* var. *minor* Chapman) some Maryland records may reflect confusion with the latter species.

**Cons/Econote**: Restricted to open, acidic waters. Populations may be temporal in early successional wetlands. This southern species has undergone a rapid range expansion into New England and has been recently located at several new stations in MD. The Service has forwarded a proposal to modify this species' State Status.

Habitat: Delmarva Bays, millponds, oxbow wetlands, beaver ponds, sandpits, lakes and ponds.

Distr. CP (Anne Arundel, Calvert, Charles, Dorchester, Queen Anne's\*, St. Mary's, Worcester).

Flw: late Apr-May (Jul); Fr: Jun-Sept.

#### Utricularia intermedia Hayne

Flatleaf Bladderwort

G5

**S**1

Lentibulariaceae (Bladderwort Family)

Scientific Name Global State State Federal Rank Rank Status Status

**Cons/Econote**: A single location in a globally rare plant community (baymouth barrier wetland, Sipple 1982) at the extreme southeastern range limit (Steury et al. 1996).

**Habitat**: Shallow waters over peaty muck soils.

Distr. CP (Kent).

#### Utricularia purpurea Walter

Purple Bladderwort

G5

S1 T

Lentibulariaceae (Bladderwort Family)

**Cons/Econote**: Threatened by habitat loss, wetland eutrophication and woody succession in Delmarva Bays (see also Fenstermacher et al. 2014).

Habitat: Delmarva Bays, acidic seepage wetlands.

**Distr**. CP (Caroline, Dorchester, Wicomico).

Flw/Fr: Jul-Aug.

#### Utricularia resupinata B.D. Greene ex Bigelow

Northeastern Bladderwort

G4

Е

S1

Lentibulariaceae (Bladderwort Family)

**Cons/Econote**: Endangered by habitat loss and habitat degradation due to eutrophication, sedimentation and hydrologic alterations.

Habitat: Millponds, wetland pools and depressions over sandy substrates.

**Distr**. CP (Dorchester, Wicomico, Worcester).

Flw/Fr: Jul-Aug.

#### Utricularia striata Le Conte ex Torrey

Fibrous Bladderwort G4

G4G5

S1 E

Lentibulariaceae (Bladderwort Family)

Syn: U. fibrosa Walter

Cons/Econote: Endangered by habitat loss and habitat degradation due to eutrophication, sedimentation and hydrologic changes.

**Habitat**: Ponds, acidic seepage wetlands.

**Distr**. CP (Anne Arundel?, Caroline, Prince George's, Wicomico, Worcester).

#### Utricularia subulata Linnaeus

Zigzag Bladderwort

G5

**S**3

Lentibulariaceae (Bladderwort Family)

**Cons/Econote**: Tiny, inconspicuous, semi-terrestrial bladderwort that occurs in a variety of habitats. Nearly impossible to locate unless flowering, which appears sporadic and unpredictable.

Habitat: Damp sands of pond shores and sandpits, inner-dune wetland/swales, acidic seepage wetlands.

**Distr**. CP, PD\* (Anne Arundel, Calvert, Caroline, Charles, Dorchester, Montgomery\*, Prince George's, St. Mary's, Wicomico,

Worcester).

Flw: Jun; Fr: Jul.

# Scientific Name Common Name Rank Rank State Federal Rank Vuularia grandiflora J.E. Smith Common Name Rank Rank Status Status

Colchiaceae (Meadow Saffron Family)

**Taxnote**: Traditionally treated in the lily family. Vinnersten and Manning (2007) determined the genus belongs in the Colchiaceae.

**Cons/Econote**: Rare because of habitat loss, fragmentation of mature cove forests and competition with invasive species.

**Habitat**: Mesic hardwoods, occasionally with hemlock (*Tsuga canadensis*) but often over rich soils.

Distr. AP (Garrett).

Flw: mid May-Jun; Fr: Jun-Jul (Aug).

#### Vaccinium macrocarpon Aiton

Large Cranberry

G4

**S**3

Ericaceae (Heath Family)

**Cons/Econote**: A habitat specialist secure only in its western Maryland stations. Coastal occurrences have been heavily impacted by development, sedimentation and hydrological alterations. The relictual Wicomico County occurrence (Eastern Shore) is likely extirpated (last seen in 2000). Perhaps introduced in some areas, e.g., the large clone southeast of the boardwalk at Suitland Bog in Prince George's County is considered to have been introduced in the early-to-mid 20<sup>th</sup> century; however, historical specimens document the species from this county.

Habitat: Mountains and Coastal Plain; sphagnous, high elevation fens, mountain pond edges, and acidic seepage wetlands.

Distr. AP, CP, RV\* (Allegany\*, Anne Arundel, Garrett, Prince George's\*, Wicomico\*, Worcester).

Flw: Jun; Fr: Jul-Oct.

#### Vaccinium myrtilloides Michaux

Velvetleaf Blueberry

G5

**S**3

Ericaceae (Heath Family)

**Cons/Econote**: A dwarf, colonial shrub characteristic of boreal glades, bogs, and forest with densely white-pubescent (velvety) twigs and leaves.

**Habitat**: Hemlock (*Tsuga canadensis*), red spruce (*Picea rubens*) and northern hardwood forests around high elevation fens, mountain pond edges, and acidic seepage wetlands.

Distr. AP (Garrett).

#### Vaccinium oxycoccos L.

**Small Cranberry** 

G5

T

**S**2

Ericaceae (Heath Family)

**Taxnote**: This tetraploid species may be distinguished from diploid *Vaccinium macrocarpon* by its smaller size; leaves that are strongly revolute and whitish on the undersides; and the situation of pedicillar bracts below the middle of the pedicel (see Uttal 1987).

Cons/Econote: A habitat specialist threatened by eutrophication and alteration of groundwater hydrology.

Habitat: Sphagnous, high elevation fens, mountain pond edges, and acidic seepage wetlands.

Distr. AP (Garrett).

Flw: early-mid Jul; Fr: Aug-Nov.

State State Federal Global Scientific Name Common Name Rank Rank Status Status G4 Valeriana pauciflora Michaux Valerian **S**1 Ε

Valerianaceae (Valerian Family)

Cons/Econote: Endangered by habitat loss and competition with invasive species, particularly garlic mustard (Alliaria petiolata) and Japanese knotweed (*Reynoutria japonica*).

**Habitat**: Rich alluvial soils of mature mesic mixed or bottomland hardwood forests.

Distr. PD, RV (Cecil, Frederick, Harford, Montgomery, Washington).

Flw: late Apr-mid May; Fr: ?

Valerianella chenopodiifolia (Pursh) A.P. de Candolle

Goosefoot Cornsalad

G5

S1Ε

Valerianceae (Valerian Family)

**Cons/Econote**: Endangered by habitat loss and competition with invasive species.

Habitat: Rich soils of mesic hardwood and bottomland forests.

**Distr.** AP, PD, RV (Allegany, Garrett, Montgomery, Washington).

Valerianella umbilicata (Sullivant) Wood

Navel-shaped Cornsalad

G3G5

SH

X

Valerianceae (Valerian Family)

Cons/Econote: Attributed to Maryland by a few collections made from 1875-1955, otherwise little known. Suspected to be newly arrived in many northern states (from the Midwest), occurring mainly in anthropogenic habitats.

**Habitat**: Moist soil of low fields, clearings and in alluvium along rivers.

**Distr**. AP, PD\*, RV? (Frederick?, Garrett, Montgomery\*).

Veratrum hybridum (Walter) Zimmerman ex Zomlefer

Broadleaf Bunchflower

G5

G5

S1

Ε

Melanthiaceae (Bunchflower Family)

Syn: Melanthium hybridum Walter

Melanthium latifolium Desrousseaux

Cons/Econote: An Appalachian endemic, Maryland populations are comprised of a few individuals. A Frederick County station has successfully flowered after caging to prevent deer browse but the Allegany County plants show no evidence of recent reproduction.

**Habitat**: Meadows and forests over rich soils derived from mafic substrates (calcareous shale, diabase).

**Distr**. PD, RV (Allegany, Baltimore\*, Cecil, Frederick, Montgomery\*).

Flw: late Jun-early Jul: Fr: Sept.

Veratrum virginicum (Linnaeus) Aiton

Virginia Bunchflower

S3

Melanthiaceae (Bunchflower Family)

Syn: Melanthium virginicum Linnaeus

**Habitat**: Fresh tidal marshes, acidic seepage swamps.

Global State State Federal Scientific Name Common Name Rank Rank Status Status

**Distr**. CP, PD, RV (Calvert, Caroline, Cecil, Dorchester, Frederick, Howard, Prince George's, Wicomico, Worcester; distribution likely incomplete).

Flw: Jul; Fr: Sept.

Vernonia gigantea (Walter) Trelease

Giant Ironweed

G5

SU

Asteraceae (Aster Family)

Syn: V. altissima Nuttall

Taxnote: Maryland plants are var. gigantea.

**Cons/Econote**: Reported from seepage swamps in the Catoctins; these plants not seen for many decades. The Service is not certain of the distribution and rarity of this species.

Habitat: Acidic seepage swamp.

**Distr**. RV\* (Frederick\*; distribution likely incomplete; should be sought in Montgomery and Washington Counties).

Veronica scutellata Linnaeus

Marsh Speedwell

G5

Е

Plantaginaceae (Plantain Family)

**Cons/Econote**: Endangered by woody succession in open wetland habitats and competition with invasive species.

Habitat: Marshes, oxbow wetlands, seepage slopes in muck soils.

**Distr**. PD, RV (Allegany\*, Frederick, Montgomery, Washington).

Viburnum lentago Linnaeus

Nannyberry

G5

**S**1

S1

Adoxaceae (Moschatel Family)

**Taxnote**: Reports of this species from other counties are frequently misidentifications of *V. cassinoides*.

**Cons/Econote**: Restricted to Garrett County (AP). However, historical specimens exist from Baltimore County (1907) of unknown provenance and Prince George's County (1947) from cultivated plants.

**Habitat**: Montane seepage wetlands.

**Distr**. AP, CP<sup>I\*</sup>, PD? (Baltimore?\*, Garrett, Prince George's<sup>I\*</sup>).

Vicia americana Willdenow

American Purple Vetch

G5T5

SH X

Fabaceae (Bean Family)

**Taxnote**: Maryland plants are the eastern ssp. americana.

Cons/Econote: Reported from a single location (W. Longbottom); these plants have not been found at that location.

Habitat: Roadside outcrop of calcareous rock.

**Distr**. RV\* (Washington\*).

Viola appalachiensis L.K. Henry

Appalachian Blue Violet

G4

**S**3

Violaceae (Violet Family)

Scientific Name Global State State Federal Rank Rank Status Status Status

Syn: Viola walteri House var. appalachiensis (L.K. Henry) L.E. McKinney

**Taxnote**: The taxonomic rank varies among authors; however, Ballard and Wujek (1994) provide substantive evidence for the recognition of *V. appalachiensis* senso stricto.

**Cons/Econote**: This species is a regional endemic to MD, PA and WV with disjunct occurrences in NC (NatureServe 2015). Maryland stations and those in neighboring Somerset County, PA form a core population where the species occurs at relatively high frequency.

Habitat: Floodplains, mesic and northern hardwood slopes, meadows.

Distr. AP (Garrett).

#### Viola esculenta Elliott ex Greene

Salad Violet

G4G5

S2

Violaceae (Violet Family)

Svn: V. palmata Linnaeus var. esculenta Elliott ex D.B. Ward

**Cons/Econote**: Maryland populations are a northern range extension for this southeastern species.

**Habitat**: Bottomland levee forest along fresh tidal reach of the Pocomoke (where locally abundant).

**Distr**. (Worcester).

Viola rostrata Pursh

Long-spur Violet

G5

**S**3

Violaceae (Violet Family)

Cons/Econote: Local but frequent in habitat.

Habitat: Montane alluvial forest, mesic northern hardwoods/hemlock.

Distr. AP, RV (Allegany, Garrett).

# Vitis rupestris Scheel

Rock Grape

G3

**S**1

Vitaceae (Grape Family)

**Taxnote**: Most Maryland records are doubtful. The population along the Potomac River in Maryland is well-documented and has persisted in the Potomac Gorge; first collected by E. S. Steele in 1896.

**Cons/Econote**: According to NatureServe (2015) the principal threat to *V. rupestris* is a change in the hydrology of its riverbank habitats, away from the natural flooding regime and periodic scouring of the riverbank. Pavek et al. (2003) suggested that MD, PA and WV populations comprise a unique genotype with a unique morphology; however, the authors noted that this may be due to introgression with *V. riparia*.

Habitat: Riverside scour bars.

**Distr**. CP\*, PD (Montgomery, Prince George's\*,).

#### Woodsia ilvensis (Linnaeus) R. Brown

Rusty Woodsia

G5

S2 T

Woodsiaceae (Woodsia Family)

**Cons/Econote**: Narrowly distributed in Maryland and generally restricted to small populations on lightly to moderately shaded outcrops. Threats include displacement by invasive species and fire suppression.

Global State State Federal Common Name Rank Status Status Scientific Name Rank **Habitat**: Shale barrens, outcrops of calcareous shales. Distr. RV (Allegany, Washington). Xyris fimbriata Elliott Fringed Yellow-eyed-grass G5 **S**1 Ε Xyridaceae (Yellow-eyed Grass Family) **Cons/Econote**: Endangered by habitat loss. Occurring in few, small populations; several are poorly protected or have been extirpated. **Habitat**: Delmarva Bays, acidic seepage wetlands. **Distr**. CP (Dorchester, Prince George's, Wicomico). Xyris smalliana Nash Small's Yellow-eyed-grass G5 S1E Xyridaceae (Yellow-eyed Grass Family) Cons/Econote: Endangered by habitat loss, hydrological alteration and woody succession of bog-like habitats. Habitat: Delmarva Bays, acidic seepage wetlands. **Distr**. CP (Caroline, Dorchester, Wicomico, Worcester\*). Zanthoxylum americanum P. Miller Northern Prickly-ash G5 S1S2 E Rutaceae (Citrus Family) **Syn**: *Xanthoxylum americanum*, an orthographic variant. **Cons/Econote**: Endangered by habitat loss and displacement by invasive species. **Habitat**: Cliffs, outcrops and glades over limestone and calcareous shale formations. **Distr**. PD, RV (Allegany, Frederick\*, Montgomery, Washington). Flw: May; Fr: Jun-Aug. Zephyranthes atamasca (Linnaeus) Herbert Atamasco Lily S1G4G5 Ε Amaryllidaceae (Amaryllis Family) Cons/Econote: A single, unprotected population and the northern-most population in the eastern U.S. **Habitat**: Headwater stream in rich, alluvial soil. **Distr**. CP (Worcester). Flw: early May; Fr: Jun-Jul. Zizaniopsis miliacea (Michaux) Döll & Ascherson Southern Wild Rice S1G5 Ε

Poaceae (Grass Family)

**Cons/Econote**: Endangered by habitat loss, conversion and displacement by common reed (*Phragmites australis*).

**Habitat**: Fresh to oligohaline marshes.

Distr. CP (Calvert, Worcester).

Flw/Fr: Jul-Sept.

		Global	State State Federal
Scientific Name	Common Name	Rank	Rank Status Status
Zizia aurea (Linnaeus) W.D.J. Koch	Golden Alexanders	G5	S3
Apiaceae (Carrot Family)			

Habitat: Mesic mixed deciduous forests, floodplain forests in rich loamy soils.

Distr. AP, PD, RV (Allegany, Frederick, Garrett, Harford, Howard, Montgomery, Washington).

Flw: May-Jun; Fr: Aug-Sept

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# APPENDIX I CHANGES TO STATE RANKS AND PROPOSALS TO ALTER STATUSES SINCE THE LAST PUBLISHED LIST (December 2016)

SCIENTIFIC NAME	COMMON NAME	CURRENT RANK	FORMER RANK	CURRENT STATUS	PROPOSED STATUS
Arethusa bulbosa	Swamp Pink	SX	SH	X	X
Asplenium bradleyi	Bradley's Spleenwort	<b>S</b> 1	<b>S</b> 1	X	E
Asplenium resilens	Black-stem Spleenwort	<b>S</b> 1	<b>S</b> 1	E	Delist
Berberis canadensis	American Barberry	SRF	SRF	X	Delist
Carex shortiana	Short's Sedge	S3S4	S2	E	Delist
Ceratophyllum echinatum	Prickly Hornwort	S2?	S2?	E	Delist
Chenopodiastrum simplex	Giant-seed Goosefoot	S2	S2	E	T
Chenopodium standleyanum	Standley's Goosefoot	S2S3	S2	E	Delist
Crassula aquatica	Water Pygmyweed	<b>S</b> 1	<b>S</b> 1	X	E
Cuscuta coryli	Hazel Dodder	<b>S</b> 1	SH	X	Delist
Dichanthelium boreale	Northern Witchgrass	SRF	SRF	X	Delist
Digitaria villosa	Shaggy Crabgrass	S1?	SH	X	Delist
Elatine minima	Small Waterwort	S1?	S1?	E	Delist
Epilobium ciliatum	Northern Willowherb	S3S4	<b>S</b> 1	E	Delist
Gillenia stipulata	American Ipecac	SRF	SRF	X	Delist
Helianthus microcephalus	Small-headed Sunflower	SRF	SRF	E	Delist
Heuchera villosa	Hairy Alumroot	SR	SR	X	Delist
Hexalectris spicata	Crested Coralroot	<b>S</b> 1	SH	X	E
Hypericum pyramidatum	Great St. John's-wort	SR	SR	X	Delist
Linnaea borealis	Twinflower	SRF	SRF	X	Delist
Linum floridanum	Florida Yellow Flax	SRF	SRF	X	Delist
Marshallia grandiflora	Barbara's Buttons	SR	SR	X	Delist
Matelea carolinensis	Carolina Anglepod	S2S3	S2	E	T
Matelea decipiens	Old-field Milkvine	SRF	SRF	X	Delist
Melothria pendula	Guadelope Cucumber	SNA	S2	E	Delist
Najas gracillima	Thread-like Naiad	SNA	SNA	X	Delist
Paspalum fluitans	Horse-tail Paspalum	S2	S2	E	T
Patis racemosa	Black-fruit Mountain-ricegrass	S2S3	S2	T	Delist
Phacelia covillei	Buttercup Scorpionweed	S2	S2	E	T
Phalaris caroliniana	May Grass	SNA	SNA	X	Delist

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CHANGES TO STATE RANKS AND PROPOSALS TO ALTER STATUSES SINCE THE
LAST PUBLISHED LIST (December 2016)

SCIENTIFIC NAME	COMMON NAME	CURRENT RANK	FORMER RANK	CURRENT STATUS	PROPOSED STATUS
Plantago pusilla	Dwarf Plantain	SNA	SNA	X	Delist
Potamogeton foliosus	Leafy Pondweed	S2	S1?	E	Delist
Potamogeton richardsonii	Richardson's Pondweed	SRF	SRF	X	Delist
Potamogeton robbinsii	Flatleaf Pondweed	S1?	SH	X	Delist
Quercus macrocarpa	Bur Oak	S1S2	S1		
Ranunculus ambigens	Water-plantain Spearwort	S1	S1	X	Delist
Ranunculus carolinianus	Carolina Buttercup	S1?	SU	X	Delist
Rhododendron calendulaceum	Flame Azalea	SR	<b>S</b> 1		
Ribes americanum	Wild Black Currant	S1	SH	X	X
Scutellaria nervosa	Veined Skullcap	S1S2	S1S2	E	T
Scutellaria parvula	Small Skullcap	SRF	SRF	X	Delist
Solidago rigida	Prairie Goldenrod	S1	S1	X	E
Solidago roanensis	Roan Mountain Goldenrod	<b>S</b> 3	S1?	E	Delist
Solidago rupestris	Rock Goldenrod	S1	<b>S</b> 1	X	Delist
Symphyotrichum concinnum	Smooth Blue Aster	S1?	S1?	X	Delist
Utricularia inflata	Swollen Bladderwort	S2	S1	E	Delist
Vitis novae-angliae	New England Grape	SNA	SNA	X	Delist
Wolffiella gladiata	Sword Bogmat	SNA	SNA	X	Delist

# APPENDIX II. PLANT SPECIES REPORTED, FALSELY REPORTED, OR ARE NO LONGER CONSERVATION TARGETS IN MARYLAND.

The following species do not occur in Maryland based upon currently available information. This is not an exhaustive treatment of the excluded flora but is included to provide clarification for those species whose previous rank has substantially changed. For those species with a rank of SR, only unverified reports exist or there is no evidence that the species occurs as a native component of the flora. Species with a rank of SRF have been falsely reported and errors may persist in the literature. Species with legal status that have recently been identified as reported falsely are included here and listed in Appendix I; however, these species will require processing regulatory changes.

Scientific Name	Common Name	State State Legal Rank Status				
Agalinis fasciculata (Elliott) Raf.	Fascicled Agalinis	SR				

Reported for the Maryland Flora by Brown & Brown (1984) [as] "rare, reported for Maryland by B&B" [Britton & Brown 1913?]. However, the 1913 version of Britton & Brown states the distribution of the species (as *Gerardia fasciculata* Elliott) as "Virginia to Florida". The revised version of Britton & Brown by H.A. Gleason (1952, v. 3, p. 243) lists "s. MD" in the species distribution. The specimen source of this Maryland record has never been confirmed and taxonomic authorities on the genus have stated that a Maryland population is unlikely and the record may have been based upon misidentification of *A. purpurea* (a common species in Maryland). This opinion seems justified as all Maryland specimens labeled as *A. fasciculata* have to date been identified as the common *A. purpurea*. There are no current records for the species and *A. fasciculata* has been excluded from the Maryland flora.

# Ampelopsis arborea (L.) Koehne Peppervine

Listed as occurring "in e. MD" by Fernald (1950, p. 994), this was repeated by Brown & Brown (1972) but the Service has located no Maryland specimen. A single collection from the District of Columbia (September 27, 1897, R. Ridgway s.n. USDC¹) may be the source, albeit erroneous, for a Maryland station.

SR

# Ampelopsis cordata Michx. Heartleaf Peppervine SRF

Not listed by Brown & Brown (1972). Attribution to Maryland apparently based upon misidentified specimens of Porcelain Berry (*A. brevipedunculata*) and species of Grapevine (*Vitis*). There are no Maryland records; the species has been excluded from the flora.

<sup>&</sup>lt;sup>1</sup> Specimen cited at institutions use international acronyms for herbaria (e.g., BALT) following Index Herbariorum (Thiers 2014).

#### Astilbe biternata (Ventenat) Britton

False Goat's-beard

**SRF** 

Listed in Norton & Brown's (1946) Catalogue of the Vascular Plants of Maryland and later reprised in Brown & Brown (1984) as [occurring] "moist woods, rare" but citing no county of occurrence. Norton & Brown (1946) cited the "National Herbarium", that is, the Smithsonian Institution Herbarium (US) as the specimen source of the record for Maryland. However, US have no Maryland specimen of this species and there are no Maryland specimens at any other regional repository. Maryland was not included in the range of the species by Mellichamp (2009, FNA<sup>2</sup>, v. 8, p. 129). The record has always been doubtful given the known distribution of the species, which occurs as far north as Giles and Floyd Counties in Virginia, some 245 km south of the southernmost point in Garrett County (the most likely county of occurrence). The species has been excluded from the Maryland flora.

#### Bacopa monnieri (L.) Wettstein

Coastal Water-hyssop

SRF

Brown & Brown (1984) cite Fernald (1950) for the Maryland record but the latter does not include Maryland in the distribution nor did Pennell (1935) in his monograph of the family. Broome et al. (1979) cite a 'pers. comm.' from Russell Brown as stating that the species was locally common on Assateague Island and additionally cite Higgins et al. (1971) flora of Assateague Island but neither of these references were used to substantiate the record in the 1984 Flora. The Assateague record was not verified by Hill (1984) performing plant surveys on the Maryland portion of Assateague Island. Lea et al. (2000) found the species on Assateague but on the Virginia portion of the island (Chincoteague National Wildlife Refuge) and not Maryland. The species has been excluded from the Maryland flora.

#### Berberis canadensis P. Miller

American Barberry

SRF X

Brown & Brown (1972) state that this species [occurs] "only in the Mountain zone of Maryland" but no place-name or collectors name was provided and there are no specimens in the Norton-Brown Herbarium (MARY, University of Maryland-College Park). Interestingly, the species was not listed in the earlier Catalogue of Maryland plants by Norton & Brown (1946). The long-standing report by Reed (1986) from Soldier's Delight in Baltimore County is often cited but this record was never confirmed by the Service. The specimen vouching for the latter record (Reed 74540), located at the Missouri Botanical Garden (MO) recently became available and is clearly the Asian *B. thunbergii*. Whittemore (1997, FNA, v. 3, p. 278) included Maryland in the distribution of *B. canadensis* but there was no specific record for the species, only the report in Brown & Brown (1972). This record has become embedded in the literature and will prove difficult to correct. This rare species occurs at its northern-most extant stations in the southern Appalachian mountains of Virginia in Bedford, Botetourt, and Pittsylvania Counties (Virginia Botanical Associates 2014). The species has been excluded from the flora.

Cardamine pratensis L. var. palustris Wimmer & Graebner

American Cuckoo-flower

SR/SNA

<sup>&</sup>lt;sup>2</sup> FNA refers Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 16+ vols. New York and Oxford.

Attributed to the flora by Brown & Brown (1984) vaguely as "little known in Maryland" but there are no specimen records. According to Weakley (2015) var. *pratensis* is Eurasian and is introduced into North America, whereas var. *palustris*, a circumboreal species of bogs, is native. Weakley additionally suggests that the two varieties may not be separable. Al-Shehbaz et al. (2010, FNA, v. 7, p. 482-483) state that at the very least "most if not all populations are introductions." The reported Maryland stations (Talbot and Montgomery Counties) are from habitats (tidal shore and river shore respectively) that are incongruous with a "bog" habitat for the native variety. The conservation status of the species (if found) would require careful evaluation. At present there are no verified Maryland records and the species has been excluded from the Maryland flora.

Carex cephaloidea (Dewey) Dewey

Thin-leaved Sedge

SRF

The Maryland records, based upon historical collections from Allegany County have been determined to be other species and not *C. cephaloidea*.

Carex molesta Mackenzie ex Bright

Troublesome Sedge

SNA

The species is not a conservation target.

Carex sartwellii Dewey

Sartwell's Sedge

**SRF** 

The Maryland record, based upon a collection from Garrett County by F. Hermann in 1938 has been determined to be the European *Carex divisa* Hudson.

Celtis laevigata Willdenow

Sugarberry

SRF

Reported by Beyersdorfer (1984) from Plummer's Island in the Potomac Gorge. Shetler et al. (2005) exclude this species from the island as it was based upon misidentified specimens of *C. tenuifolia*.

Chamaesyce vermiculata (Rafinesque) House [Euphorbia vermiculata (Rafinesque) House]

Hairy Spurge

SNA

Illustrated but not otherwise treated in Brown & Brown (1984). Maryland records (Charles and Montgomery Counties) presumably derive from Hitchcock & Standley (1919); however, this species is excluded from the Washington-Baltimore Flora as no evidence could be found of its existence (see Shetler & Orli 2000, p. xv). The only other record (Prince George's County) was a misidentified specimen of a common weed, *E. humistrata*. The species might occur in Maryland as an exotic in disturbed ground but there is yet no evidence of the species in the flora.

Crotalaria rotundifolia Walter ex J.F. Gmelin

Rabbit-bells

SR

No evidence for the species occurring in Maryland.

Croton capitatus Michaux

Hogwort

SE

The species is not a conservation target.

Dichanthelium boreale (Nash) Freckmann

Northern Witchgrass

SRF X

For many years there was a single record of *D. boreale* from Piscataway Park in Prince George's County, MD that was once thought to represent a striking disjunct. However, Maryland plants are the newly circumscribed *D. bicknellii* (Nash) LeBlond (species no. 19 in Weakley 2015) and *D. boreale* is not known to occur in Maryland.

Dioscorea hirticaulis Bartlett

Wild Yam

**SNR** 

Not currently recognized as a species, rather a synonym of the common D. villosa.

Eleocharis geniculata (L.) Roemer & J.A. Schultes

Capitate Spikerush

SRF

Reported in Brown & Brown (1984) but with no specific distribution. This attribution likely derived from Norton & Brown's (1946) Catalogue of the Vascular Plants of Maryland. Norton & Brown (1946) source H. K. Svenson's monographic studies in *Eleocharis* (Svenson 1929, 1939) but Svenson does not list a Maryland specimen or make reference to a Maryland or even mid-Atlantic occurrence. This incongruity may be resolved in that Norton & Brown (1946) include *E. capitata* (L.) R. Brown in their concept of *E. geniculata*, the former a synonym of *E. tenuis* (Willd.) J.A. Schultes, a common and widespread species in Maryland. This name was apparently misapplied to *E. tenuis* by Norton & Brown (1946) and Brown & Brown (1984) repeated the error. The species has been excluded from the Maryland flora.

Euphorbia pubentissima Michaux

Southeastern Flowering Spurge

SRF

The attribution to Maryland for this southeastern plant is based upon a specimen citation in Hitchcock & Standley's (1919) Flora of the District Columbia and Vicinity and a specimen collected from what may be the same station i.e., "College Park" in Prince George's County. K. Park (1998) cites a single Maryland specimen from Baltimore County in his monograph. However, the Prince George's County specimen is a partial collection of *E. corollata* and the Baltimore County specimen, although listed and mapped by Park (1998) as *E. pubentissima* was annotated, by Park, as *E. corollata*. This species has been excluded from the Maryland flora.

## Galium trifidum L.

Small Bedstraw

SR

Reported in Brown & Brown (1984) as occurring in "wet soils and bogs; infrequent." There is some probability that this species occurs in Maryland; the hypothesized range based upon occurrences in Pennsylvania would be Garrett County on the Appalachian Plateau and not the Atlantic Coastal Plain where most of our records are attributed (many based upon simple taxonomic confusion resulting from an older name, *G. trifidum* var. *tinctorium* = *G. tinctorium*). There are so many reports that it is unlikely that every specimen attributing the species to Maryland will be found, thus it is not possible to definitively rank the species as reported falsely. All specimens at the Norton-Brown Herbarium (MARY, University of Maryland-College Park) and in the DC & Local collection at the Smithsonian (USDC) that form the basis of our flora have been determined to be other species.

Gillenia stipulata (Muhlenberg ex Willdenow) Nuttall American Ipecac [Porteranthus stipulatus (Muhlenberg ex Willdenow) Britton]

SRF X

Attribution to Maryland based upon a 1938 collection by G. Reynard from Mountain Lake Park in Garrett County. The specimen has been determined to be the common *Gillenia trifoliata*.

Helianthus microcephalus Torrey & A. Gray

Small Woodland Sunflower SR

Е

Reported by Brown & Brown (1984) as occurring in Frederick County; this based upon a specimen collected by E. Baltars in 1967 (specimen not found). Reported by the Service from a site in Howard County; however, specimens from this site have been determined to be the common *H. divaricatus*. Inventory from the historical station in Frederick County were similarly the common *H. divaricatus*. Additionally, both records are phytogeographically unlikely, the range of the species barely enters Maryland in the far western part of the state. Currently, there are no stations for this species and it has been excluded from the Maryland flora.

#### Heuchera villosa Michaux

Hairy Alumroot

SR X

Reported by Brown & Brown (1984) as occurring on "rocky outcrops, Allegany County". This record cannot be substantiated. The species has been excluded from the flora but is present in neighboring West Virginia and might be expected to occur in w. MD.

Hypericum ascyron L. [H. pyramidatum Aiton]

Great St. John's-wort

SR X

Reported in Brown & Brown (1984) as occurring in Cecil County; this apparently based upon a personal communication "Reveal & Broome". Broome et al. (1979) cite a collection made from "islands of the Susquehanna", which is apparently based upon information in Tatnall (1946, p. 175). Tatnall (1946) cites a J. Crawford collection made in 1924 but the Service has determined that there is no specimen collected by Crawford as this species. Weakley (2015) cites Robson (2000) as the source for Maryland but Robson cites only Brown &

Brown (1984) as the source. The attribution to the Maryland flora is based upon a series of literature errors and the species has been excluded from the Maryland flora.

Hypericum tubulosum Walter
[Triadenum tubulosum (Walter) Gleason]

Large Marsh St. Johns-wort SRF

Attributed to Maryland based upon a nomenclatural error that proliferated into many false reports. Brown & Brown (1984) correctly stated that Maryland plants were *H. tubulosum* var. *walteri* (raised to species rank (*H. walteri*) by J.G. Gmelin). *H. tubulosum* ranges north to se VA (Weakley 2015) and the species has been excluded from the Maryland flora.

Juncus brachycarpus Engelmann

Short-fruited Rush

SNA

The species is not a conservation target

Krigia biflora (Walter) S.F. Blake

Two-flower Dwarf-dandelion SRF

Brown & Brown (1984) state that the species [occurs] "throughout; most common on the Coastal Plain." The only species of *Krigia* that is common on the Coastal Plain is *K. virginica*, thus it appears that Brown & Brown misapplied the concept to this species. This explanation is unsatisfactory because the authors also treat *K. virginica* as common on coastal sands. There are no Maryland specimens at any Maryland or regional herbarium where specimens would most likely be deposited. This species inclusion on the Watchlist is a long-persisting error that the Service has now corrected. The species has been excluded from the Maryland flora.

Kyllinga pumila Michaux

Thin-leaved Flatsedge

SNA

The species is not a conservation target

Leptochloa fusca (L.) Kunth.

Long-awned Diplachne

SNA

The species is not a conservation target

ssp. fascicularis (Lamarck) N. Snow

Linnaea borealis Linnaeus

Twinflower

SRF X

Recorded for Maryland in Norton & Brown (1946, p. 39) citing Britton & Brown (1913), the latter stating the species is found [in] "mountains of Maryland". The revised Britton & Brown by H.A. Gleason (1952) seems to have corrected this error, citing West Virginia instead. Brown & Brown (1972) cited Fernald (1950, p 1336) as their source for the Maryland record. The base source is most likely Shreve (1910), who had mentioned this species but only in the context of declines due to the logging of virgin forests in the southern

Appalachians, and importantly he does not include it in his species lists for Maryland. The record may have been based on a pre-1900 observation or collection in Maryland (e.g., Shreve or earlier botanists), but this seems unlikely as no one attributes a collector's name, place name or even a county of location. Alternatively, the author(s) may have attributed the species to Maryland given that the species occurs ~48 km south at Ice Mountain, Hampshire County, West Virginia (which is an extraordinary disjunct location). There are no Maryland specimens based upon searching local, regional, national, and international herbaria. The record appears to be a long-repeated error that appeared in the early floristic literature. The species has been excluded from the Maryland flora.

#### Linum floridanum (Planchon) Trelease

Florida Yellow Flax

SRF X

Reported in Brown & Brown (1984) as "infrequent; coastal and W-B area". The common citation of "in W-B flora" refers to Hitchcock & Standley's (1919) Flora of the District of Columbia and Vicinity and/or latter checklists of the Washington-Baltimore geographic area (e.g., Hermann 1946). The only verified record for this species is from the District of Columbia (G. Vasey, USDC); the rest of the treatment in Brown & Brown (1984) was merely speculative. Additionally, the District of Columbia record is so far removed from the natural range of the species (ne NC south to TX) that some consider it to be the result of a labeling mistake. Other Maryland records were based upon misidentifications of other *Linum* species. The species has been excluded from the Maryland flora.

## Ludwigia brevipes (B.H. Long ex Britton, A. Braun, & Small) Eames

Long Beach Seedbox

SRF

Report based upon a misidentified specimen. This species does not occur in Maryland.

Manfreda virginica (L.) Salisbury ex Rose [Agave virginica L.]

False Aloe

SRF

Reported in Brown & Brown (1984) as occurring "in open woods and dry-open areas; roadsides; occasional" but the authors provided no information on distribution. This species has not once been recorded from Maryland in any collection, taxonomic treatment or regional floristic work and has been excluded from the Maryland flora.

Marshallia grandiflora Beadle & F.E. Boynton

Barbara's Buttons

SR X

Reported in Brown & Brown (1984) citing a communication from Reveal & Broome. Broome et al. (1979, p. 48) list a station for Garrett County along the Youghiogheny River but this report has never been substantiated and no populations, specimens, photographs or other documentation have been located by the Service. This species should be excluded from the flora; however, the species is extant in the Pennsylvania portion of the Youghiogheny River.

#### Matelea decipiens (Alexander) Woodson

Old-field Milkvine

SRF X

Brown & Brown (1984) cite this species as occurring in the "W-B flora". The common citation of "in W-B flora" refers to Hitchcock & Standley's (1919) Flora of the District of Columbia and Vicinity; however, the species name does not occur in that document. The earlier flora by Ward (1881) does not include the species under any synonym nor does the name appear in Hermann's (1941) Washington/Baltimore Checklist. This record is clarified in the updated W-B flora by Shetler & Orli (2000); the latter authors state "this species not in Washington area, according to D.J. Drapalik's annotation, 1970". Drapalik (1969) states that *M. decipiens* [is] "infrequent: throughout various provinces in MD, TENN, NC, SC, GA, LA, TX, OKLA, Ark and MO". However, Drapalik cites no Maryland specimen and studied no populations of *M. decipiens* in the State. Brown & Brown (1984) do not cite Drapalik (1969) although they certainly might have had access to this dissertation. Instead, Brown & Brown (1984) additionally cite Gray's Manual "in Maryland (Grays Manual)" [i.e., Fernald 1950]. Fernald (1950, p. 1177) states the following distribution "S.C. to La., n. to (?) Md, Mo. and Okla." Presumably, Fernald was considering a report from Maryland but the Service cannot substantiate the record. (Note also that Perry (1938) stated that the specimens at Fernald's home institution, the Gray Herbarium of Harvard University, documented only Missouri, Arkansas and Louisiana.) All references to this species in the Maryland flora point to the Washington-Baltimore area but there are no records. Thus, this species has been excluded from the Maryland flora.

#### Melothria pendula Linnaeus!

Guadeloupe Cucumber

SNA E

Occurring in Maryland as scattered and generally small populations in edge/ruderal habitats. Recent evidence suggests the species is expanding its range northward, thus the more recently discovered stations occupying unremarkable habitat may represent newly founded adventive populations (see also Knapp et al. 2011).

Najas flexilis (Willd.) Rostokovius & Schmidt

Slender Naiad

SNA

The species is not a conservation target

Najas gracillima (A. Braun ex Englemann) Magnus

Thread-like Naiad

SNA X

Recent surveys have located this species in a variety of anthropogenic habitats (ponds and reservoirs) as well as native (riverine) habitats. The consensus of the SAV working group (2016) was that the species has been overlooked, and finally, is not an appropriate conservation target.

Najas guadalupensis (Sprengel) Magnus

Southern Naiad

SNA

The species is not a conservation target

# Persicaria careyi (Olney) Greene [Polygonum careyi Olney]

Carey's Smartweed

SR

Reported in Anderson, R. R., C. C. Phillip, R. D. Rappleye and R. G. Brown. 1965. Check-list of vascular aquatic plants on the upper Patuxent estuary. Maryland Agricultural Experiment Station, Department of Botany, Contribution no. 3707, misc. publication no. 556, July 15, 1965. No Maryland specimens have been located.

#### Phalaris caroliniana Walter

May Grass

SNA X

Reported in Brown & Brown (1984) as occurring [on the] "Coastal Plain; rare." This attribution to Maryland is presumably based upon Shreve (1910) who cited a Robert K. Miller specimen from "near Towson" and/or upon Norton (1930) who mentioned "a southern grass in cultivation." The species is widely planted as a forage crop but no specimen has been found to substantiate the record. Additionally, Maryland is not within the natural range of the species, which according to Weakley (2015) is "NC west to OR, south into Mexico, the original distribution now obscured." The Maryland station, doubtlessly planted as an experimental crop, is located ~ 500 km north of the northernmost station in NC. The species is not a conservation target and has been excluded from the native Maryland flora.

## Plantago pusilla Nuttall

**Dwarf Plantain** 

SNA X

Reported as infrequent on the Coastal Plain and Piedmont by Brown & Brown (1984); the Service is uncertain of the basis of that attribution. The native range for this species is unclear; Weakley (2015) suggests the species is native to the south-central U.S. Recently collected in a lawn and perhaps only a waif or infrequently occurring weed in our range. The species is not a conservation target.

## Poa languida Hitchcock

Weak Bluegrass

SRF

The only Maryland record is based on F.J. Monteferrante's (1973) study of vascular plants at Soldier's Delight in Baltimore County. Both specimens at Towson University (BALT) (Monteferrante 084, 101 BALT) are *Poa saltuensis*. The species has been excluded from the Maryland flora.

# Potamogeton natans L.

Floating Pondweed

SNA

Reported as "common throughout" by Brown & Brown (1984) but there are few supporting vouchers at the Norton-Brown Herbarium (MARY, University of Maryland-College Park), all from Prince George's County from a pond (Snowden Pond) on the grounds of the Patuxent Wildlife Refuge. The earliest dated specimen (1947) states "from Massachusetts stock" clearly indicating that the species was introduced. The other two collections (made in 1950) are recollections from the same pond. The species was not reported for Maryland by Haynes & Hellquist (2000, FNA v. 22, p. 64). The species reaches its natural southern limit in ne PA and n. Delaware (where perhaps also introduced). The species is not a conservation target.

#### Potamogeton richardsonii (Bennett) Rydberg

Richardson's Pondweed

SRF X

Reported as occurring in Cecil County, Maryland by Brown & Brown (1984) based upon a collection listed in Tatnall (1946). Other historical records, based upon old collections (US) from Anne Arundel, Charles and Harford Counties, have been determined to be other species. The species has been excluded from the Maryland flora.

#### Rhododendron calendulaceum (Michaux) Torrey

Flame Azalea

SR

Reported as occurring only in Garrett County by Brown & Brown (1972). Our records, suspiciously at the northern range limit for this species, are likely a mix of planted specimen shrubs and mistaken identities based upon pale forms of *R. roseum*. Locations of specimens determined by the late Melvin Brown cannot be relocated and the species has been excluded from the Maryland flora.

#### Rhododendron canescens Michaux

Hoary Azalea

**SRF** 

Reported from Delaware and Maryland by Fernald (1950, p. 1119) and this error was repeated by Gleason & Cronquist (1991). Wesley Knapp and William McAvoy (publication in progress) have determined that Fernald misinterpreted pubescent *R. periclymoides* as *R. canescens* in the northern portion of its range. Judd & Kron (2009, FNA, v. 8, p. 469) properly cite the northern limit of the range as being southeastern NC.

#### Ribes hirtellum Michaux

Low Wild Gooseberry

SNA

The species is not a conservation target

# Scutellaria parvula Michaux var. parvula

Small Skullcap

SRF X

Attribution to Maryland based upon a nomenclatural error. The only Maryland record is based upon Shreve (1910, p. 475) citing a location in Prince George's County (Upper Marlboro) communicated by Joseph H. Painter. Although there are multiple specimens in the National Herbarium (US and USDC collections, Smithsonian Institution) labeled as *S. parvula*, all of these were annotated by Carl Epling, in 1938 as *S. leonardii*. Previous to 1938 the name, *S. leonardii* (published in Epling 1939) was not available and all Maryland plants would have been called *S. parvula*. The species has been excluded from the Maryland flora.

#### Solidago stricta Aiton

Wand-like Goldenrod

SR

Reported by Semple and Cook (2006, FNA, v. 20, p. 137-138) from Maryland but according to current work (J. Semple, pers. comm. 2012) the species does not occur north of northeastern NC. Brown & Brown (1984) cite specimens from Prince George's and Cecil Counties but the source of these records has never been substantiated. Kolb (1991) searched numerous local and regional herbaria and found two specimens in the Fessenden Herbarium at Cylburn Arboretum (Eduards Baltars 2697, 4145) labeled as *S. stricta* from

Montgomery County. These specimens were actually *S. simplex* var. *racemosa*, a plant that is local to the Potomac Gorge. Shreve (1910) lists *S. stricta* as occurring in the "midland zone" (Piedmont and Ridge and Valley) but the name was misapplied to *S. erecta* and *S. hispida*. Hitchcock and Standley (1919) list *S. neglecta* and state that this species is the *S. stricta* of Ward's (1881) Flora (with the range of Maryland to Maine) but their concept is based upon the boreal wetland plant, *S. uliginosa*. The current Checklist of the Washington-Baltimore Area (Shetler & Orli 2000) list *S. stricta* but only cite Brown & Brown (1984) as the source. Tatnall (1946) only cites collections from Delaware. Semple (pers. comm.) suggests that plants in Delaware are probably *S. perlonga* as the plants identified as *S. stricta* from NJ are *S. perlonga*.

#### Spiranthes laciniata (Small) Ames

Lace-lip Ladys'-tresses

SR

This species does not occur in Brown & Brown (1984) but Maryland is shown in the range maps of Luer's (1975) The Native Orchids of the United States and Canada, and Maryland is listed in the range provided by Sheviak & Brown (2003, FNA, v. 26, p.534). However, no Maryland location or collection is known and at present all the Service may state is that the species has been reported in the literature.

Sporobolus compositus (Poiret) Merrill [S. asper]

Long-leaved Rushgrass

**SNA** 

The species is not a conservation target

Sporobolus neglectus Nash

Small Rushgrass

SNA

The species is not a conservation target

Stachys latidens Small ex Britton

Broad-toothed Hedge-nettle SRF

This species is an endemic of the high elevations of the Southern Appalachian Mountains (Weakley 2015), reaching its northern limit in nw Pennsylvania. The potential range may include the Appalachian Plateau of western Maryland but there are no records from that province. Reported from Piscataway Park (Prince George's and Charles Counties) the specimen that was originally determined by John Nelson (USCH) as *S. latidens* has been determined (by Nelson, after reviewing additional specimens from that locality) as variants of the widespread and common *S. hispida*. Reported from Baltimore County by Eduard Baltars (3154 Cylburn Arboretum Herbarium), this specimen was also *S. hispida*. The species has been excluded from the Maryland flora.

Stachys nuttallii Shuttleworth ex Bentham

Nuttall's Hedge-nettle

SRF

Reported by Brown & Brown (1984) "from mountains of Maryland and the W-B area" as *S. nutallii* [sic]. These reports (and others) are based largely upon misapplication of the name, *S. nuttallii* Shuttlew. to the southeastern species, *Stachys eplingii* J.B. Nelson (see Nelson

& Fairey 1979). Taxonomic confusion likely extends to reports of the southern Appalachian species *S. cordata* and *S. clingmannii* in Maryland. See discussion under the treatment for *S. eplingii*.

Turritis glabra L. [Arabis glabra (L.) Bernhardi]

Tower Mustard SR

Reported by Brown & Brown (1984) as occurring [in] "Worcester County and Delaware; rare". The only Maryland record was based upon a collection by E. A. Higgins from Assateague Island (Worcester County). The specimen is not *Arabis* (*Turritis*) *glabra*. The species has been excluded from the Maryland flora but has been recently reported from Garrett County.

Viola blanda Willdenow var. palustriformis A. Gray Largeleaf White Violet SR [V. incognita Brainerd]

Reported from Frederick County by Hickey (1975), perhaps in error as Wiegand (2005) could not confirm a location but reports many stations for *V. blanda*. Reported from Harford County by Reed (1986) but no specimen has been found to verify the record. Species is known from the mountains and two locations in the inner Piedmont foothills in Virginia (Virginia Floristic Associates 2014) to the south of Maryland and synonymized with *V. blanda* to our north in the Pennsylvania Flora (Rhoads & Block 2007), but it is not possible to determine trends in geographic distribution across Maryland other than to hypothesize that potential occurrences may be restricted to western Maryland. Recognition of *V.incognita* as a species is controversial with some authorities placing it as a variety or subsumed entirely within the relatively common, and highly variable, *V. blanda* Willdenow.

#### Viola septentrionalis Greene

Northern Blue Violet

SR

Reported by Brown & Brown (1984) from Cranesville Swamp in Garrett County but with no corresponding specimen. Additionally and dubiously reported by Stieber (1971) in his flora of Anne Arundel County based upon a collection by Higman. We have not seen the specimen but the report seems incongruous with the mountain range of this species; for example, Weakley (2015) interprets the species as a rare component of the southern and central Appalachian Mountains.

# Vitis x novae-angliae Fernald

New England Grape

SNA X

One collection from Washington County; the Service has not located the specimen. No floristic author lists Maryland as within the distribution of this hybrid (between the common *V. labrusca* and *V. riparia*), which is narrowly restricted to the northeastern US from Maine to Pennsylvania. This taxon is not a conservation target.

#### Wolffia borealis (Englemann) Landolt

Northern Watermeal

SR/SNA

Reported by Brown & Brown (1984, as *W. punctata*) as [occurring] in "DC (Reveal)". The attribution to the District of Columbia is based upon misapplication of the name *W. punctata* Griesbach (= *W. brasiliensis*, Shetler & Orli 2000). Additional reports by the Service from the Eastern Shore (Wicomico and Worcester Counties) are mostly likely based upon taxonomic confusion with the nearly ubiquitous *W. brasiliensis* Weddel. The species is not known south of a few scattered localities in Pennsylvania (Rhoads & Klein 1993; Landolt 2000); the reported occurrences in Virginia are also doubtful, these also likely based upon taxonomic confusion with *W. brasiliensis* (Virginia Botanical Associates 2014). The species is not a conservation target.

Wolffiella gladiata (Hegelmaier) Hegelmaier

Sword Bogmat

SNA X

[Wolfiella floridana (Donnell-Smith) C. Thompson]

The species is not a conservation target.

**Appendix III**. The following list includes 69 ecological community groups recognized by the Maryland Natural Heritage Program. It is organized hierarchically reflecting the structure of Maryland's Natural Community Classification and meant to serve as a reference. Additional information including the full classification, descriptions, fact sheets, and vegetation studies may be accessed at the following link (dnr.maryland.gov/wildlife/Pages/plants\_wildlife/nhpnatcomm.aspx).

TERRESTRIAL SYSTEM	MARITIME FORESTS, WOODLANDS, AND DUNES	
MESIC FORESTS	Maritime Dune Grassland	
Northern Hardwood Forest	Maritime Dune Scrub	
Acidic Cove Forest	Maritime Dune Woodland	
Rich Cove Forest	Maritime Forest	
Eastern Hemlock - Hardwood Forest		
Mesic Mixed Hardwood Forest	PALUSTRINE SYSTEM	
Basic Mesic Forest	ALLUVIAL WETLANDS	
	Bald Cypress - Gum Swamp	
DRY-MESIC FORESTS AND WOODLANDS	Semipermanent Impoundment	
Dry - Mesic Calcareous Forest	Floodplain Pool	
Basic Oak - Hickory Forest	Coastal Plain - Piedmont Bottomland Forest	
Acidic Oak - Hickory Forest	Montane - Piedmont Bottomland Forest	
Eastern White Pine - Hardwood Forest	Montane - Piedmont Small- Stream Forest	
Oak - Heath Forest	Depositional Bar and Shore	
Coastal Plain Oak - Beech Heath Forest	River-Scour Woodland	
Boulderfield Forest and Woodland	Riverside Prairie	
DRY FORESTS AND WOODLANDS	NON-ALLUVIAL WETLANDS	
Montane Pine - Oak Woodland	High-Elevation Seepage Swamp	
Montane - Piedmont Acidic Woodland	Montane - Piedmont Acidic Seepage Swamp	
Montane - Piedmont Basic Woodland	Montane - Piedmont Basic Seepage Swamp	

Montane Dry Calcareous Forest and	Coastal Plain - Piedmont Acidic
Woodland	Seepage Swamp
Coastal Plain Dry Calcareous Forest	Coastal Plain - Piedmont Basic
and Woodland	Seepage Swamp
Coastal Plain Pine - Oak Woodland	Coastal Plain - Piedmont Acidic
	Seepage Bog/Fen
Inland Sand Dune and Ridge	Montane Peatland
Woodland	
	Montane - Piedmont Wet
	Meadow/Fen
GLADES, BARRENS, AND ROCK	Montane - Piedmont Seep
OUTCROPS	
Limestone Glade	Upland Depression Swamp
Sandstone Glade	Coastal Plain Non-Riverine
	Hardwood Swamp
Serpentine Barren	Baymouth Barrier Wetland
Shale Barren	Atlantic White Cedar Swamp
Basic Outcrop Barren	Delmarva Bay
Riverside Outcrop Barren	
Acidic Cliff and Bluff	
Basic Cliff	
NON-TIDAL MARITIME	
WETLANDS	
Interdunal Swale	
Maritime Swamp	
Sea-Level Fen	
ESTUARINE SYSTEM	
TIDAL WETLANDS	
Intertidal Shore	
Tidal Freshwater / Oligohaline	
Aquatic Bed	
Tidal Freshwater Marsh and	
Shrubland	

	Tidal Hardwood Swamp						
	Tidal Bald Cypress Swamp						
	Tidal Oligohaline Marsh and						
	Shrubland						
	Tidal Mesohaline / Polyhaline						
	Aquatic Bed						
	Tidal Mesohaline Marsh and Shrubland						
	Salt Pannes						
RIV	ERINE SYSTEM						
	Riverine Aquatic Bed						
MA	RINE SYSTEM						
N	IARINE INTERTIDAL						
	Coastal Beach						
			<u> </u>				

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## **Glossary of Terms**

Term	Definition
Allopolyploid	Having two or more complete sets of chromosomes derived from different species.
Allozyme	Molecular markers from protein electrophoresis. These markers are variants of enzymes arising from mutations in structural genes.
Alluvial	Relating to, composed of, or found in alluvium.
Alluvium	Sediments deposited by or in conjunction with running water in rivers, streams, or sheetwash.
Amphibolite	Medium- to coarse-grained metamorphic rocks that are composed of amphibole minerals such as hornblende and plagioclase. These are the diagnostic rocks of the amphibolite facies of regional metamorphism
	and may be derived from premetamorphic rocks of various types. Mafic igneous rocks (e.g., basalts and gabbros) and sedimentary dolomite can be the parent rocks of amphibolite.
Anthropogenic	Created, caused or induced by human actions.
Apogamous	Development of a sporophyte from a gametophyte without fertilization.
Basic	Minerals such as calcium and magnesium that produce soils with high pH values.
Boreal	Relating to, or growing in higher latitude, northern regions.
Brackish	A general term describing somewhat salty tidal waters with a mix of salt and fresh water.
Calcareous	Consisting of or containing calcium carbonate.
Calciphile	A plant restricted to calcium-rich substrates.
Circumboreal	Of or occurring in the boreal region, i.e., the high northern latitudes of the northern hemisphere.
Congener	A member of the same taxonomic genus as another plant or animal.
Cryptic	Difficult to discern or identify. Often used to refer to organisms whose taxonomic identity may be obscure or hidden.
Diabase	An igneous, medium to fine-grained mafic rock.
Diploid	Having two full chromosome complements per cell.
Disjunct	Marked by separation from a usually contiguous geographic range.
Ecotone	A transition area between two plant communities.
Endemic	Restricted or peculiar to a particular geographic region.
Epiphyte	A plant deriving its moisture and nutrients from the air and growing upon another plant (especially a tree).
Eutrophication	A process in which bodies of water become rich in dissolved nutrients (nitrogen, phosphates, etc.) but often are seasonally deficient in oxygen.
Extirpated	Destroyed or removed, generally referring to a particular geographic region, e.g., extirpated from Maryland but secure in other regions of the U.S. as opposed to extinct, which means destroyed completely.

Fall Line	A narrow zone demarcating the geological intersection of upland consolidated rock (bedrock) of the Piedmont
	and unconsolidated coastal plain sediments.
Felsic	Silicate minerals that contain elements such as aluminum, potassium, sodium, produce soils with low pH values.
Fen	Wetland fed by a flowing mineral-rich surface or groundwater.
Fresh tidal	Referring to tidal waters with 0-0.5 parts-per-thousand (ppt) salinity.
Glauconitic	Referring to a mineral soils consisting of a dull green earthy iron and potassium phosphates occurring abundantly in greensand.
Gneiss	A metamorphic rock with visible grains, highly metamorphosed and often color banded with layers of different minerals.
Infraspecific	Within (infra) a species, referring (generally) to varieties or subspecies within a single species.
Intertidal	Referring to the portion of the shoreline that is underwater during an average high tide and exposed at an average low tide.
Invasible	Referring to the potential of some natural communities to be invaded by non-native invasive species.
Limestone	A sedimentary rock containing calcite that generally has high levels of plant-available calcium.
Mafic	Referring to silicate minerals containing magnesium and iron and that produce soils with high pH values.
Mesic	Relating to an environment containing a moderate amount of soil moisture.
Mesohaline	Referring to estuarine water having salinity between 5-18 parts per thousand.
Millpond	A pond produced by damming a stream to produce a head of water for operating a mill.
Minerotrophic	Referring to soil (usually a wetland) characterized by nutrients carried by groundwater through mineral soils.
Montane	Of or relating to mountainous regions.
Nontidal	Not influenced by tidal action.
Oligohaline	Referring to estuarine waters with 0.5-5 parts-per-thousand (ppt) salinity.
Orthographic	Referring to a variant spelling.
Pleistocene	The first epoch of the Quaternary Period, usually associated with the most recent glacial advance (the Wisconsinan).
Polyploid	An organism having more than twice the number of haploid chromosomes, i.e., which typically arises from sexual reproduction.
Pyrogenic	Producing or produced by wildfire as a natural process.
Relict	A persistent remnant of an otherwise extinct (or extirpated) flora or fauna.
Relictual	Of or relating to a relict.
Riparian	Related to or living or located on the bank of a natural watercourse such as a river.
Saline	Containing salt, referring to tidal waters with measurable salinity.
Scour bar	A feature of natural river courses where the action of moving currents removes and/or deposits alluvium.
Seep	Referring to groundwater flow at the soil surface.
Serpentine	Underlain by or composed of serpentinite, a green or black group of mafic minerals that as a group are called
	serpentine.

Shell-marl	A limy (calcium carbonate) earthy mixture of fine sediments containing deposits of snail or bivalve shells.
Shell-midden	Deep layers of oyster shell deposited by native Americans.
Sphagnous	Related to an abundance of Sphagnum moss.
Swale	A low lying, depressed, and often wet stretch of land, often dominated by herbaceous plant growth.
Taxa	Plural of taxon, a taxonomic group in a formal system of classification.
Taxon	A name applied to a taxonomic group in a formal system of classification.
Tetraploid	Having four times the haploid number of chromosomes arising via sexual reproduction (e.g. eggs and sperm) or
	more often apomixis.
Tidal	Influenced by the action of tides.
Triploid	Having three full chromosome complements per cell.
Ultramafic	Referring to metamorphic or igneous rocks composed of all or nearly all mafic minerals.
Xeric	Characterized by only a small amount of soil moisture.



Leatherwood (*Dirca palustris*), a species listed as Threatened in Maryland. (Photo credit, Edward L. Thompson)